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MEDICAL BOTANY:

CONTAINING

SYSTEMATIC AND GENERAL DESCRIPTIONS,

WITH

Plates of all the Medicinal Plants,

COMPREHENDED IN THE

CATALOGUES OF THE MATERIA MEDICA,

AS PUBLISHED BY THE

ROYAL COLLEGES OF PHYSICIANS OF LONDON, EDINBURGH, AND DUBLIN;

TOGETHER WITH THE PRINCIPAL MEDICINAL PLANTS NOT INCLUDED IN THOSE PHARMACOPŒIAS.

ACCOMPANIED WITH A CIRCUMSTANTIAL DETAIL OF THE MEDICINAL EFFECTS, AND OF THE DISEASES IN WHICH THEY HAVE BEEN MOST SUCCESSFULLY EMPLOYED.

BY

WILLIAM WOODVILLE, M.D. F.L.S.

THIRD EDITION,

IN WHICH THIRTY-NINE NEW PLANTS HAVE BEEN INTRODUCED.

THE BOTANICAL DESCRIPTIONS ARRANGED AND CORRECTED BY

DR. WILLIAM JACKSON HOOKER, F.R.S. L.S. &c.

Who has added an Index following the Arrangement of Jussieu.

THE NEW MEDICO-BOTANICAL PORTION SUPPLIED BY

G. SPRATT, ESQ. AUTHOR OF THE FLORA MEDICA,

Under whose immediate Inspection the whole of the Plates have been coloured.

IN FIVE VOLUMES.

VOL. III.

LONDON:

PUBLISHED BY JOHN BOHN, 17, HENRIETTA STREET.

1832.

Dedication to the first edition.

TO THE

PRESIDENT

AND

FELLOWS

OF THE

ROYAL COLLEGE OF PHYSICIANS,

EDINBURGH:

THIS THIRD VOLUME OF MEDICAL BOTANY,

IS, WITH GREAT RESPECT,

INSCRIBED BY

THE AUTHOR.

and separated into six lobes, of these the outermost is the largest: the calyx is tubular, whitish, woolly, and cut into five short pointed segments: the filaments are two long and two short, slender, white, and furnished with simple antheræ: the germen is quadrifid, and supports a slender style, with a bifid stigma: the seeds are four, of a brown colour, and lodged in the calyx, which serves the purpose of a capsule.

This little shrub flowers from July till September. It is a native of Spain, and is said to grow plentifully also in Greece, Ægypt, Crete, and Syria.

Whether this plant was known to the ancients or not, does not appear from the descriptions of Theophrastus and Dioscorides.—Cortusus [a] discovered that cats are remarkably fond of Marum;* and from this circumstance we are enabled with certainty to trace back its history to his time, for ever since it has been known by the name of Cat-thyme: there occurs however considerable difficulty in ascertaining its synonyma; and probably some of those to which we have referred, are not sufficiently identified. It was first cultivated in England by Parkinson [b] in 1640, and is now to be found in many of our gardens.

The leaves and younger branches of Marum, when recent, on being rubbed between the fingers, emit a volatile aromatic [c] smell, which readily excites sneezing, but to the taste they are bitterish, accompanied with a sensation of heat and acrimony. Lewis observes, that "the Marum loses but little of its pungency on being dried, and in this respect it differs remarkably from many other acrid herbs, as those called antiscorbutic. It gives out its active matter

[a] See Jac. Antonii Cortusi Catalogus Horti Patavini, *anno* 1591, & J. Bauh. l. c.

* Cats are also known to have a similar fondness for the Nepeta Cataria, and the roots of Valeriana off.

[b] Vide Aiton's *Hort. Kew.*

[c] Murray says,—Ut sal volatile olfactum grato suo et camphoraceo fere aromate nares vellicant, in sternutationem usque, et per momentum temporis animum eximie erigunt. App. Med. vol. 2. p. 108.

partially to water, and completely to rectified spirit.—Distilled with the former, it yields a highly pungent, subtile, volatile essential oil, similar to that of scurvy grass, but stronger, and of less perishable pungency. Rectified spirit carries off likewise, in the inspissation of the spirituous tincture, a considerable share of the smell and pungency of the Marum, but leaves much the greatest part concentrated in the extract; which, on being tasted, fills the mouth with a durable, penetrating, glowing warmth."[d]

Judging from the sensible qualities of this plant, it may be supposed to possess very active powers, and on this consideration it is strongly recommended by Wedelius [e] as an important remedy in many diseases requiring medicines of a stimulant, aromatic, and deobstruent quality; and his opinion seems in some measure to have been since verified by actual experience of its efficacy, as appears from the instances of its successful employment by Linnæus,[f] Rosenstein,[g] and Bergius.[h] The last mentioned writer says of it, *Virtus:* nervina, tonica, resolvens, emmenagoga, diuretica, errhina. *Usus:* Cachexia, Hysteria, Debilitas nervorum.

At present, however, Marum is here chiefly used as an errhine, and is an ingredient in the pulvis asari compositus of the London Pharmacopœia. The dose of the powdered leaves is from a scruple to half a dram, which Murray advises to be given in wine.

[d] Lewis Mat. Med. p. 412.

[e] *Diss. de Maro resp.* Hermanno 1703.—Its cephalic efficacy is highly commended by Hermann *(Cynos. Mat. Med. tom. 2. p. 349.)* and Boerhaave *(Hist. Plant. hort. L. B. p. 262.)*

[f] Of these we may mention Menstrua suppressa, Apoplexy, Asthma, and various other pulmonary affections. Vide l. c.

[g] Murray says, "Litteris vero ad me datis, vir. illustris perscripsit, se eadem medela b. Rosensteinio, dirissima et pertinacissima tussi cum difficillima respiratione in ultimo morbo conflictato, levamen attulisse exoptatissimum." l. c.

[h] He mentions the case of a lady who received a blow upon the head by falling from a carriage, which brought on a species of apoplexy, and was cured by this plant, after several other means had been tried ineffectually. M. M. p. 504.

Teucrium Scordium

Published by W. Phillips, Dec.ʳ 1ˢᵗ 1807.

TEUCRIUM SCORDIUM. WATER GERMANDER.

SYNONYMA. Scordium. *Pharm. Lond. & Edinb. Gerard. Emac.* p. 661. *Bauh. Pin.* p. 274. *J. Bauh. Hist. iii.* p. 292. *Raii Hist.* p. 576. *Synop.* p. 245. Scordium legitimum. *Park. Theat.* p. 111. Chamædrys foliis mollibus, hirsutis, ellipticis, crenatis, verticillis paucifloris. *Hal. Stirp. Helv. n.* 288. Teucrium Scordium. *Withering. Bot. Arrang.* p. 591. *Flor. Dan.* 593.

Class Didynamia. *Ord.* Gymnospermia. *Lin. Gen. Plant.* 706.

Ess. Gen. Ch. *Corollæ* labium superius (nullum) ultra basin 2-partitum, divaricatum ubi stamina.

Sp. Ch. T. foliis oblongis sessilibus dentato-serratis, floribus geminis axillaribus pedunculatis, caule diffuso.

THE root is perennial, fibrous, creeping: the stems are branched, trailing, square, hairy, and more than a foot in length: the leaves are serrated, hairy, oblong, veined, of a dusky-green colour, without footstalks, and placed in pairs: the flowers stand in verticilli or whorls of two, three, or four together, upon short peduncles, placed at the base of the leaves: the corolla is monopetalous, consisting of a short tube, which divides at the mouth into two lips, but the upper is extremely short, and cleft in the middle, and therefore appears to be wanting: the under lip is long, of a purple colour, dentated at the sides, and terminated by a large roundish expanded segment: the calyx is tubular, hairy, and cut at the extremity into five short teeth: the filaments are four, two long and two short, slender, bent, and crowned with simple antheræ: the germen divides into four parts, from the centre of which rises a slender style, furnished with a bifid stigma: the seeds

are four, naked, of an irregular shape, and lodged in the bottom of the calyx. It is a native of England, in marshy situations, and flowers in July and August.

The leaves of Scordium have a smell somewhat of the garlick kind.[a] and to the taste they are bitterish, and slightly pungent. "When moderately and newly dried they give out their smell and taste both to water and to rectified spirit. In distillation their peculiar flavour arises with water, but the impregnation of the distilled fluid is not strong, nor could any essential oil be obtained on submitting to the operation several pounds of the herb."[b]

The ancients, to whom Scordium was well known,[c] attributed to it a peculiar antiseptic[d] and alexipharmic power, and for many ages it had the character of being remarkably efficacious in all pestilential and putrid diseases; with a view to this, it was afterwards directed in the composition of several officinal medicines,[e] supposed to be antidotes to various kinds of poisons and infections; and we are told, even at a date not very remote from the present, of its successful use in the plague, which raged in Turkey.[f] But notwithstanding the Scordium was formerly considered such a cele-

[a] From this smell it is supposed to take the name Scordium, or Σκορδον, which signifies Garlick; and the milk of animals, which feed upon this plant, is said to acquire a similar flavour. [b] Lewis *Mat. Med. p.* 596.

[c] We are far from being certain that the plant we have figured is really the Scordium of the ancients, and on this account we have not referred it to the Greek writers.

[d] Of the fabulous accounts of its antiseptic powers, we may mention the following from Galen: Scriptum autem est a quibusdam viris gravissimis, cùm in bello interemptorum cadavera multos dies insepulta jacuissent, quæcunque supra scordium fortè fortuna ceciderant, multo minus aliis computruisse, ea præsertim ex parte quæ herbam contigerat. *Lib. de Antidot.* 6. *cap.* 12.

[e] The Mithridate and Theriaca have but lately been expunged from our dispensatories; and though often experienced to be useful remedies, yet with Haller we may say, "Sed cæ farragines sunt medicamentorum, in quibus non dignoscas, cui tribuas eventa." l. c.

[f] Vide *Lettres par De Foy. t.* 1. *p.* 198. and Chenot *de peste, p.* 132.

Rosmarinus officinalis

Published by W. Phillips, Dec.r 1.st 1817.

brated remedy, and still has place in both the Pharmacopœias, yet it appears to be a very insignificant article of the Materia Medica, and is therefore very justly fallen into disuse; and in this opinion we have the authority of Dr. Cullen, who says, " this plant has a bitter, joined with some volatile parts; but neither of these qualities is considerable enough to retain it in the present practice."[g] Bergius however states *virtus* to be antiputredinosa, tonica, diaphoretica, diuretica, resolvens;[h] and some others recommend it to be employed externally in antiseptic cataplasms and fomentations.

[g] *Mat. Med. vol. 2. p. 82.* [h] *Mat. Med. p. 505.*

ROSMARINUS OFFICINALIS. COMMON ROSEMARY.

SYNONYMA. Rosmarinus. *Pharm. Lond. & Edinb.* Rosmarinum coronarium. *Gerard. Emac. p.* 1292. Rosmarinus hortensis angustiore folio. *Bauh. Pin. p.* 217. Rosmarinus coronarius fructicosus. *J. Bauh. Hist. v. ii. p.* 25. *Raii Hist. p.* 515. Libanotis coronaria sive rosmarinum vulgare. *Park. Theat. p.* 71.

Class Diandria. *Ord.* Monogynia. *Lin. Gen. Plant.* 38.

Ess. Gen. Ch. Cor. inæqualis: labio superiore bipartito. *Filamenta.* longa, curva, simplicia cum dente.

THE root is strong, woody, and fibrous: the stalk is shrubby, covered with a rough grey bark, divided into many branches, and rises frequently to the height of six or eight feet: the leaves are sessile, or without footstalks, numerous, long, narrow, entire, obtusely pointed, on the upper side of a dark green, on the under of a greyish or silvery colour, and placed in whorls upon the branches: the flowers are large, of a pale blue colour, and arise

from the axillæ of the leaves: the calyx is divided into two lips, of these the uppermost is entire, but the undermost is cloven into two pointed segments: the corolla is monopetalous, consisting of a cylindrical tube, longer than the calyx, and divided at the brim into two lips; the upper lip is erect and bifid, the under lip is separated into three segments; of these the middle segment is larger than both the others: the two filaments are long, curved, tapering, towards the base furnished with a small tooth, and supplied with simple antheræ: the germen is separated into four parts, which support a slender style, terminated by a cleft pointed stigma: the seeds are four, of an oblong shape, and lodged in the bottom of the calyx. Rosemary [a] is a native of the South of Europe and the Levant. It is commonly cultivated in our gardens, where it usually flowers in April and May.

The ancients were well acquainted with this plant, as it is mentioned by Dioscorides, Galen, and Pliny.[b] It grows wild in some of the southern parts of France, but more abundantly in Spain and Italy. Its cultivation in this country, like many other plants which we have had occasion to mention, is probably of ancient date, but now cannot be traced beyond the time of Gerard.

Rosemary has a fragrant aromatic smell, and a bitterish pungent taste. The leaves and tops of this plant are the strongest in their sensible qualities: the flowers, which are also directed for use by the College, are not to be separated from their cups or calyces, as the active matter principally, if not wholly, resides in the latter.[c]

[a] Ros dici putatur quia roscidæ sit naturæ, vel quia roris instar aspergatur, vel quia ejus usus in aspergillis, *quod nobis verisimilius videtur:* marinus autem vel quia in marinis locis feliciter proveniat, vel quia saporis marini, hoc est, amari. Voss. Etymolog. Vide Ray, l. c.

[b] It is called Λιβανωτις by the Greeks, (Dioscor. *Lib.* 3. *cap.* 89.) Pliny, *Lib.* 24. *cap.* 11. *de rore marino.* Hence it may have been alluded to by Virgil in the following lines:

Nam jejuna quidem clivosi glarea ruris
Vix humiles apibus casias roremque ministrat. GEORG. *ii. v.* 212.

[c] *Lewis M. M. p.* 544.

" Rosemary gives out its virtues completely to rectified spirit, but only partially to water, The leaves and tops, distilled with water, yield a thin light pale-coloured essential oil of great fragrancy, though not quite so agreeable as the Rosemary itself: from one hundred pounds of the herb in flower were obtained eight ounces of oil: the decoction thus divested of the aromatic part of the plant yields, on being inspissated, an unpleasant bitterish extract. Rectified spirit likewise, distilled from Rosemary leaves, becomes considerably impregnated with their fragrance, leaving however in the extract the greatest share both of their flavour and pungency. The active matter of the flowers is somewhat more volatile than that of the leaves, the greatest part of it arising with spirit."[d]

Rosemary is reckoned one of the most powerful of those plants, which stimulate and corroborate the nervous system; it has therefore been recommended in various affections, supposed to proceed from debilities, or defective excitement of the brain and nerves; as in certain headachs, deafnesses, giddinesses, palsies, &c. and in some hysterical and dyspeptic symptoms. Dr. Cullen supposes the stimulant power of Rosemary insufficient to reach the sanguiferous system;[e] it has however the character of being an emmenagogue, and the only disease in which Bergius states it to be useful is the chlorosis.[f] The officinal preparations of this plant are the oleum essentiale roris marini, and the spiritus roris marini. It is also a principal ingredient in what is known by the name of Hungary water.

[d] *Lewis, l. c.*

[e] " It has justly had the reputation of a cephalic, or as a medicine that gently stimulates the nervous system, but hardly so strongly as to affect the sanguiferous." *M. M. vol. ii. p.* 151.

By many people Rosemary is drunk as tea for breakfast.

[f] " *Virtus:* resolvens, nervina corroborans, emmenagoga. *Usus.* Chlorosis."—M. M. p. 21.

MARRUBIUM VULGARE. COMMON WHITE HOREHOUND.

SYNONYMA. Marrubium. *Pharm. Lond. & Edinh.* Marrubium album vulgare. *Bauh. Pin.* p. 230. *Park. Theat.* p. 44. Marrubium album. *Gerard Emac.* p. 693. *Raii Hist.* p. 556. *Synop.* p. 239. Marrubium dentibus calycinis denis, recurvis. *Hal. Stirp. Helv.* n. 258. *Hudson. Flor. Ang.* p. 260. *Withering. Bot. Arr.* p. 617.

Class Didynamia. *Ord.* Gymnospermia. *Lin. Gen. Plant.* 721.

Ess. Gen. Ch. *Cal.* hypocateriformis, rigidus 10-striatus. *Corollæ.* lab. sup. 2-fidum, lineare, rectum.

Sp. Ch. M. dentibus calycinis setaceis uncinatis.

THE root is perennial, and furnished with numerous fibres: the stalks are upright, strong, square, hairy, or downy, and rise about a foot and a half in height: the leaves are roundish or oblong, deeply serrated, veined, wrinkled, hoary, and stand in pairs upon thick broad footstalks: the flowers are white, and produced in whorls at the footstalks of the leaves: the calyx is tubular, scored, and divided at the mouth into ten narrow segments, which are hooked at the end: the corolla is monopetalous, gaping, compressed, consisting of a cylindrical tube, opening at the mouth into two lips: the upper lip is narrow, and cloven or notched; the under lip is broader, reflected, and divided into three segments, the middlemost of which is broad, and slightly scolloped at the end; the lateral segments are spear-shaped and short: the filaments are two long and two short, supplied with simple antheræ, which are concealed in the tube: the germen is divided into four parts, from which issues a slender style, furnished with a cloven stigma: the seeds are four, of an oblong shape. It grows near the sides of roads and rubbish, and flowers in June.

Marrubium vulgare

Published by W. Phillips, Dec.1st 1807

"The leaves of Horehound have a moderately strong smell of the aromatic kind, but not agreeable, which by drying is improved, and in keeping for some months is in great part dissipated: their taste is very bitter, penetrating, diffusive, and durable in the mouth." "The dry herb gives out its virtue both to watery and spirituous menstrua: on inspissating the watery infusion, the smell of the Horehound wholly exhales, and the remaining extract proves a strong and almost flavourless bitter: rectified spirit carries off likewise greatest part of the flavour of the herb, leaving an extract in less quantity than that obtained by water, and of more penetrating bitterness."[a]

This plant is the πρασιον of the ancients, by whom it is greatly extolled for its efficacy in removing obstructions of the lungs and other viscera.[b] It has chiefly been employed in humoural asthmas,[c] obstinate coughs, and pulmonary consumptions;[d] instances are also mentioned of its successful use in scirrhous affections of the liver,[e] jaundice,[f] cachexies, and menstrual suppressions.[g]

That Horehound possesses some share of medicinal power may be inferred from its sensible qualities, * but its virtues do not appear

[a] *Lewis. M. M. p.* 411.

[b] *Dioscorides, Lib. iii. c.* 119. See also *Pliny, Lib. xx. c.* 22.

[c] *Rhazes ad Mansor. 3. n.* 42. Particularly, infarctions of the lungs and difficulty of breathing from viscid mucous.

Lösecke, Arzneym. p. 382. *Lange, Miscell. verit. med. p.* 57.

[d] *Alex. Trallian. Lib. v.* Vide *Celsus, Lib. iii. cap.* 22. *Cœliūs Aurelianus, Morb. chron. Lib. ii. p.* 423. *De Haen Rat. Medend. P. iv. p.* 252. But he and *Haller* often found it fail; the latter says, Ego quidem in morbis similibus cum difficili sputorum excreatione infusum aquosum utiliter dedi: & in phthisi satis profecta semel vidi utile fuisse, non autem in aliis exemplis: potius vero mihi movere videtur, quam reprimere. l. c.

[e] *Zacutus Lusitanus, Prax. admir. Lib.* 2. *Obs.* 48. *Chomel, Usuell. T. i. p.* 232.

[f] *Forrest. Op. Lib.* 19. *Obs.* 19. & 40. [g] *Borellus, Hist. et Observ. Cent. iv. p.* 14.

* Taken in considerable quantities it is said to loosen the body.

to be clearly ascertained,[h] and the character it formerly obtained is so far depreciated, that it is now rarely prescribed by physicians. A dram of the dry leaves in powder, or two or three ounces of the expressed juice, or an infusion of half a handful of the fresh leaves have been directed for a dose. This last mode is usually practised by the common people, with whom it is still a favourite remedy in coughs and asthmas.[i]

[h] Bergius says, *Virtus:* tonica, emmenagoga, diuretica. *Usus:* Cachexia, ob. mensium, Hysteria, Asthma pituitosum.

[i] "It has had the reputation of a pectoral: but in many trials, its virtues in that way have not been observed; and in several cases it has been judged hurtful. For its use in Asthma and Phthisis, and for its power in resolving indurations of the liver, I consider the authorities of Forrestus, Zacutus Lusitanus, and Chomel, to be very insufficient; and the events they have ascribed to it seem to be very improbable." *Cullen Mat. Med. vol. ii. p.* 155.

MELISSA OFFICINALIS. COMMON BALM.

SYNONYMA. Melissa. *Pharm. Lond. & Edinb. Gerard. Emac. p.* 689. *Raii Hist. p.* 570. Melissa hortensis. *Bauh. Pin. p.* 229. *Tourn. Inst.* 193. Melissa vulgaris. *Park. Theat. p.* 40. Melissa vulgaris odore Citri. *J. Bauh. Hist. iii. p.* 232. Melissa petiolis unifloris, folio brevioribus, foliis cordatis serratis. *Hall. Stirp. Helv. n.* 242.

α Melissa *romana,* floribus verticillatis sessilibus, foliis hirsutis.
Roman Balm. *Mill. Dict.*

Class Didynamia. *Ord.* Gymnospermia. *Lin. Gen. Plant.* 728.

Ess. Gen. Ch. *Cal.* aridus, supra planiusculus: lab. superiore subfastigiato. *Corollæ* lab. super. subfornicatum, 2-fidum; lab. inf. lobo medio cordato.

Sp. Ch. M. racemis axillaribus verticillatis: pedicellis simplicibus.

Melissa officinalis

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THE root is perennial, fibrous: the stems are erect, quadrangular, smooth, branched towards the bottom, and usually rise two or three feet in height: the leaves are heart or egg-shaped, spreading, rough, ribbed, veined, deeply serrated, of a bright green colour, and placed in pairs upon footstalks, which of the lower leaves are very long: the flowers are white or yellowish, placed in whorls or clusters at the alæ of the leaves, and appear in June and July: the bracteæ are oblong, notched, hairy, and placed at the peduncles: the calyx consists of one tubular pentangular leaf, divided at the brim into two lips, of these the upper is larger, and divided at the extremity into three segments; the under is shorter at the margin, and cut into two teeth: the corolla is monopetalous, bilabiated, tubular: the upper lip is the shorter, with a notch at the apex; the lower is cleft into three parts, of which the middlemost is the largest: the filaments are four, two long and two short, and furnished with oblong antheræ: the germen divides into four parts, from the centre of which issues a long slender style, crowned with a cleft stigma: the seeds are four, egg-shaped, and lodged at the bottom of the calyx.

Schultz, who has professedly written on this plant,* was unable to say by what name it was known to the ancients. The Μελισσοφυλλον seu Μελιττωνα, of Dioscorides, which has been by some supposed to be our Melissa, is by Nicander referred to the Marrubium.‖

The Balm is a native of the southern parts of Europe, especially in mountainous situations, but it is very common in our gardens, and was cultivated in that of Gerard previous to the year 1596. The herb, in its recent state, has a weak roughish aromatic taste, and a pleasant smell, somewhat of the lemon kind, and hence this species has been named Melissa odore citri.

" On distilling the fresh herb with water, it impregnates the first runnings pretty strongly with its grateful flavour: when large quantities are subjected to the operation at once, there separates

* J. Hen. Schultz, *De Melissa, anno* 1739.

‖ *Theriac v.* 554. 555.

and rises to the surface of the aqueous fluid a small portion of essential oil, in colour yellowish, and of a very fragrant smell."[a]

Balm, was formerly esteemed of great use in all complaints thought to proceed from a disordered state of the nervous system: thus it was very generally recommended in melancholic and hypochondriacal affections, and in the opinion of Paracelsus, the *primum ens Melissæ* promised a complete renovation of man: even Hoffman and Boerhaave, who were probably biassed by the Arabian physicians, deemed it an efficacious remedy.[b] Simon Paulli[c] and others speak of its effects as an emmenagogue; but neither this, nor indeed any other medicinal power, is now attributed to Balm. Prepared as tea, however, it makes a grateful diluent drink in fevers, and in this way it is commonly used either by itself or acidulated with the juice of lemons.

The essential oil, which Hoffman supposes to be a powerful corroberant of the nervous system, probably possesses no qualities peculiarly different from many other aromatics and cordials.

[a] *Lewis, M. M. p.* 417. [b] *Quad. bot. p.* 436.

[c] Fr. Hoffman, *Diss. de remed. domest.* §. 20. Boerh. *Chem. T. ii. p.* 67.

MENTHA PIPERITA. PEPPER-MINT.

SYNONYMA. Mentha piperitis. *Pharm. Lond. & Edinb.* Mentha spicis brevioribus & habitioribus, foliis menthæ fuscæ, sapore fervido piperis. *Raii Synop. p.* 234. *Hist. v. iii. p.* 284. Mentha piperita. *Hudson Flor. Ang. p.* 251. *Withering Bot. Arrang. p.* 599. *Relhan Flor. Cantab. p.* 223. *Icon. V. Knigge Diss. de mentha piperitide.*

Class Didynamia. *Ord.* Gymnospermia. *Lin. Gen. Plant.* 713.

Ess. Gen. Ch. *Corolla* subæqualis, 4-fida, lacinia latiore emarginata. *Stamina* erecta, distantia.

Mentha piperita

Published by W. Phillips Dec.r 3.1801.

Sp. Ch. M. flor. capitatis, fol. ovatis petiolatis, staminibus corolla brevioribus.

THE root is perennial, creeping, and furnished with many small fibres: the stems are erect, square, jointed, striated, somewhat branched towards the top, and rise about two feet in height: the leaves are egg-shaped, serrated, pointed, nerved, of a dark green colour, and stand in pairs upon footstalks: the flowers are small, purple, and produced in terminal spikes, separated into clusters: the calyx is tubular, permanent, reddish, striated, hairy, and divided at the brim into five small pointed segments: the corolla is tubular, divided at the limb into four segments, of which the uppermost is the broadest, and notched at the apex: the filaments are two long and two short, tapering, and furnished with roundish antheræ: the germen is divided into four parts, supporting a slender erect style, which is longer than the corolla, and terminated by a cloven expanding stigma: the seeds are four, small, and lodged in the calyx. It is a native of England, affecting watery situations and banks of rivers, and flowers in August.

The spontaneous growth of this plant is said to be peculiar to Britain; but as it is generally preferred to the other species of Mint, its cultivation has long been extended over Europe, and that employed here is commonly raised in gardens. This species has a more penetrating smell than any of the other mints, and a much stronger and warmer taste, pungent and glowing like pepper, sinking as it were into the tongue, and followed by a sensation of coldness.

" By maceration, or infusion, it readily and strongly impregnates both water and spirit with its virtue.—In distillation with water it yields a considerable quantity of essential oil of a pale greenish yellow colour, growing darker coloured by age, very light, subtile, possessing in a high degree the specific smell and

penetrating pungency of pepper-mint.*——Rectified spirit, drawn off with a gentle heat from the tincture made in that menstruum, brings over little of the virtue of the herb, nearly all its pungency and warmth remaining concentrated in the extract."[a]——

Its stomachic, antispasmodic, and carminative qualities renders it useful in flatulent colics, hysterical affections, retchings, and other dyspeptic symptoms, acting as a cordial, and often producing immediate relief. Its officinal preparations are an essential oil, a simple water, and a spirit.

* Dr. Cullen observes, that "rectification is particularly necessary and proper for this essential oil. What has been called essence of pepper-mint, seems to me to be no other than the rectified oil dissolved in spirit of wine." Vide *M. M. vol. ii. p.* 150.

[a] *Lewis, M. M. p.* 422.

We have already noticed that this plant yields camphor. See *Gaub. Advers. p.* 99. *sqq.*

MENTHA VIRIDIS. SPEAR MINT.

SYNONYMA. Mentha sativa. *Pharm. Lond. & Edinb.* Mentha angustifolia spicata. *Bauh. Pin. p.* 227. *Raii Hist. p.* 532. Mentha angustifolia spicata, glabra folio rugosiore, odore graviore. *Raii Synop. p.* 233. Mentha romana. *Gerard. Emac. p.* 680. Mentha romana angustifolia, sive Cardiaca. *Park. Theat. p.* 31. Mentha foliis elliptico-lanceolatis, spicis cylindricis glaberrimis. *Hall. Stirp. Helv. n.* 229. Mentha spicata. *Hudson. Flor. Ang. p.* 221. Mentha viridis. *Withering. Bot. Arrang. p.* 597.

Class Didynamia. *Ord.* Gymnospermia. *Lin. Gen. Plant.* 713.

Ess. Gen. Ch. Cor. Subæqualis, 4-fida: lacinia latiore emarginata. *Stamina* erecta distantia.

Sp. Ch. M. spicis oblongis, foliis lanceolatis nudis serratis sessilibus, staminibus corolla longioribus.

1. Mentha viridis

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THE root is perennial, creeping, and beset with numerous small fibres: the stems are square, hollow, erect, branched, and rise above two feet in height: the leaves are large, elliptical, serrated, pointed, of a bright green colour, and placed in pairs close to the stem, or upon very short footstalks: the flowers are small, purplish, and produced in terminal spikes: the filaments are longer than the corolla. In other respects the different parts of the flower correspond with the description given of the pepper-mint. It flowers in August.

This plant grows wild in many parts of England, and was found on the banks of the Thames by Mr. Hudson;* but it is more rarely met with in this state than the preceding species. It is not so warm to the taste as pepper-mint, but has a more agreeable flavour, and is therefore preferred for culinary uses, and more generally cultivated in our gardens. Many virtues are ascribed to mint by the ancients, but to what species the Ἡδυοσμος & Μινθη of the Greeks[a] is to be referred, must ever remain uncertain: even at this time the different species of this extensive family are not satisfactorily ascertained; but, in a medical sense, this is of little importance, as the virtues of all reside in the aromatic flavour, which is common to the whole genus.

" On drying, the leaves lose about three-fourths of their weight without suffering much loss of their smell or taste; nor is the smell soon dissipated by moderate warmth, or impaired on keeping. Cold water, by maceration for six or eight hours on the dry herb, and warm water in a shorter time, become richly impregnated with its flavour.—By distillation, a pound and a half of the dry leaves communicate a strong impregnation to a gallon of water: the

* See *Withering*, l. c.

[a] Mint has not escaped the notice of the Latin poets:

——— ——— ——— An tibi quondam
Fœmineos artus in olentes vertere menthas
Persephone, licuit? OVID. MET. L. x. v. 728

By Martial it is called " ructatrix Mentha." *Epigr.* L. 10. 48.

distilled water proves rather more elegant if drawn from the fresh plant in the proportion of ten pints from three pounds. Along with the aqueous fluid an essential oil distils, of a pale yellowish colour, changing to a red, in quantity near one ounce from ten pounds of the fresh herb in flower, smelling and tasting strongly of the mint, but somewhat less agreeable than the herb itself. Dry mint, digested in rectified spirit, either in the cold or with a gentle warmth, gives out readily its peculiar taste and smell, without imparting the grosser and more ungrateful matter, though the digestion be long continued. The tincture appears by day-light of a fine dark green, by candle-light of a dark red colour:* a tincture extracted from the remaining mint by fresh spirit, appears in both lights green: the colour of both tinctures changes in keeping, to a brown. On gentle distillation, with proof spirit, the spirituous portion which rises at first, discovers little flavour of the mint; but as soon as the watery part begins to distil, the virtues of the mint come over plentifully with it. Hence the spiritus menthæ sativæ. P. L. which is prepared by drawing off a gallon of proof spirit from a pound and a half of the dried plant, proves strongly impregnated with the mint."[b]

To spear-mint are to be ascribed the same medicinal qualities which we have noticed of Pepper-mint;† but the different preparations of the former, though more pleasant, are perhaps less efficacious. "It contains much essential oil, but of an odour somewhat less agreeable than that of lavender or marjoram. It is there-

* Dr. Withering says, "the fact is, that a small quantity of this tincture is green either by day-light or by candle-light, but a large quantity of it seems impervious to common day-light: however, when held between the eye and a candle, or between the eye and the sun, it appears red; so that if put into a flat bottle it appears green, but when viewed edgeways, red. *L. c.*

† In proof of the emmenagogue power of mint, Linnæus informs us, that a woman, by the frequent use of it, became subject to menorrhagia. Vide *Diss. de Menthæ usu, p.* 9.

[b] *Lewis, M. M. p.* 419.

fore less employed as a cephalic; but it acts very powerfully on the parts to which it is immediately applied, and therefore considerably on the stomach, invigorating all its functions. It acts especially as an antispasmodic, and therefore relieves pains and cholic depending upon spasm. It will also stop vomiting, depending upon such a cause; but there are many cases of vomiting in which it is of no service: and in these cases, anywise depending upon inflammatory irritation in the stomach itself, or in other parts of the body, it aggravates the disease, and increases the vomiting. Practitioners have thought, and I think justly, that the infusion of mint in warm water, agrees better with the stomach than the distilled water, which is often somewhat empyreumatic."[c]

Lewis observes,[d] " that it is said by some to prevent the coagulation of milk; and hence it has been recommended to be used along with milk diets, and even in cataplasms and fomentations for resolving coagulated milk in the breasts: upon experiment, the curd of milk, digested in a strong infusion of mint, could not be perceived to be any otherwise affected than by common water; but milk, in which mint leaves were set to macerate, did not coagulate near so soon as an equal quantity of the same milk kept by itself."[e]

The officinal preparations of Spear-mint are an essential oil, a conserve, a simple water, and a spirit.

[c] *Cullen, M. M. vol. ii. p.* 149. [d] *L. c.*

[e] We are told, that " when cows have eaten the mentha arvensis, as they will do largely at the end of summer, when the pastures are bare, and hunger distresses them, their milk can hardly be made to yield cheese; a circumstance which sometimes puzzles the dairy-maids." *With. l. c.*

MENTHA PULEGIUM. PENNYROYAL MINT.

SYNONYMA. Pulegium. *Pharm. Lond. & Edinb. Raii Hist. p.* 533. *Synop. p.* 235. Pulegium latifolium. *Bauh. Pin. p.* 222. Pulegium regium. *Gerard. Emac. p.* 671. Pulegium vulgare. *Park. Theat. p.* 29. Mentha caule prostrato, foliis subrotundis obiter dentatis, staminibus exsertis. *Hall. Stirp. Helv. n.* 221. Mentha Pulegium. *Hudson. Flor. Ang. p.* 254. *Withering. Bot. Arr. p.* 602. *Lightfoot. Flor. Scot. p.* 306. *Relhan. Flor. Cantab. p.* 224.

Class Didynamia. *Ord.* Gymnospermia. *Lin. Gen. Plant.* 713.

Ess. Gen. Ch. *Cor.* subæqualis, 4-fida: lacinia latiore emarginata. *Stamina* erecta distantia.

Sp. Ch. M. floribus verticillatis, foliis ovatis obtusis subcrenatis, caulibus subteretibus repentibus.

THE root is perennial, creeping, fibrous: the stems are slender, procumbent, obtusely quadrangular, branched, and about a foot in length: the leaves are ovate, obtuse, somewhat indented, smooth, of a bright green colour, and stand upon short footstalks at the joints of the stem: the flowers are small, of a pale purple colour, and surround the stem at the joints in whorls: the calyx is tubular, striated, ventricose, and divided into five bearded segments; of these the two uppermost are the largest; the undermost one the least. The other parts of inflorescence agree with the preceding species of Mentha already described. It flowers in August and September.

Pennyroyal, like the other mints, is a native of Britain, affecting heaths and moist situations; but that used for medicinal purposes is commonly the produce of cultivation. It has a warm pungent

Mentha Pulegium

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flavour, somewhat similar to mint, but more acrid, and less agreeable both in smell and taste. Its "active principle is an essential oil, of a more volatile nature than that of mint, coming over hastily with water at the beginning of the distillation, and rising also in great part with highly-rectified spirit; in taste very pungent, and of a strong smell; when newly drawn, of a yellowish colour, with a cast of green; by age turning brownish."[a]

The Pulegium certainly possesses the general properties of the other mints: it is supposed, however, to be of less efficacy as a stomachic, but more useful as a carminative, and emmenagogue, and is more commonly employed in hysterical affections. We are told by Boyle,[b] and others, that it has been successfully used in the hooping-cough; but the chief purpose to which it has long been administered is promoting the uterine evacuation. With this intention, Haller recommends an infusion of the herb with steel, in white wine, which he never knew to fail of success.[c] However, in the opinion of Dr. Cullen, mint is in every respect a more effectual remedy than Pennyroyal; and "nothing but the neglect of all attempts to establish principles could have made physicians think of this as a peculiar medicine different from the other species:"[d] and conformably to this remark, it may be observed, that this plant is less frequently used now than formerly.

Its officinal preparations are a simple water, a spirit, and an essential oil.

[a] *Lewis, M. M. p.* 524.

[b] See his Works, Vol. iv. p. 475. Sauvages *Nosol. T.* 2. *P.* 2. *p.* 157.

[c] *He says,* —— quod me nunquam fefellet. *Vide, l. c.*

[d] *Mat. Med. vol. ii. p.* 150.

ORIGANUM VULGARE. WILD MARJORAM.

SYNONYMA. Origanum. *Pharm. Lond.* Origanum sylvestre. *Bauh. Pin. p.* 223. Origanum anglicum. *Gerard. Emac. p.* 666. Origanum vulgare spontaneum. *J. Bauh. Hist. iii. p.* 236. *Raii Hist. p.* 539. *Synop. p.* 236. Origanum foliis ovatis, umbellis coloratis, staminibus exsertis. *Hall. Hist. Stirp. Helv. n.* 233. Origanum vulgare. *Huds. Flor. Ang. p.* 262. *ed.* 2*d. Lightf. Flor. Scot. p.* 317. *Withering Bot. Arr. p.* 621. *Curtis Flor. Lond.* 338.

Class Didynamia. *Ord.* Gymnospermia. *Lin. Gen. Plant.* 726.

Ess. Gen. Ch. *Strobilus* tetragonus, spicatus, calycees colligens.

Sp. Ch. O. spicis subrotundis paniculatis conglomeratis, bracteis calyce longioribus ovatis

THE root is perennial, creeping, and beset with numerous slender fibres: the stem is erect, square, purplish, downy, producing opposite branches, and rises about a foot and a half in height: the leaves stand upon footstalks in pairs at the joints; and are ovate, pointed, somewhat indented at the edges, above smooth, beneath downy, and of a deep yellowish green colour: the flowers are numerous, terminal, of a pale purplish colour, and stand in pannicles or clusters: the bracteæ, or floral leaves, are ovalish, sessile, and of a brownish red colour: the calyx is tubular, and divided at the brim into five segments, which are fringed at the edges: the corolla consists of a funnel-shaped tube, longer than the calyx, divided at the limb into two lips, of which the upper is erect, bifid, obtuse; the lower trifid, blunt, and spreading: the filaments are four, two long and two short, of a purple colour, and furnished with double

Origanum vulgare

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Origanum Majorana

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antheræ: the germen is divided into four parts, from the centre of which rises a filiform style, crowned with a stigma, which is bifid, and reflexed: the seeds are four, egg-shaped, and lodged in the bottom of the calyx.

This plant grows wild in many parts of Britain, especially on dry chalky hills,[a] or gravelly soils, and produces its flowers in July and August. It has an agreeable aromatic smell, approaching to that of marjoram, and a pungent taste, much resembling thyme, to which it is likewise thought to be more nearly allied in its medicinal qualities than to any of the other verticillatæ, and therefore deemed to be emmenagogue, tonic, stomachic, &c. These effects, however, can only be ascribed to the aromatic and stimulant powers which all the herbs of this natural order seem to possess in common. Distilled with water it yields a moderate quantity of very acrid penetrating essential oil, which has been much used for easing the pain of carious teeth, by dropping it on cotton, and inserting it in the cavity of the aching tooth. The dried leaves used instead of tea, are said to be exceedingly grateful. They are also employed in medicated baths and fomentations.

[a] Hence the derivation Origanum, ὀρεγανος montis gaudium, quod locis montanis delectetur. Vide *Bod. in Theoph. p.* 562.

The country people use the tops of the plant to dye purple. *Withering, l. c.*

ORIGANUM MAJORANA. SWEET MARJORAM.

SYNONYMA. Majorana. *Pharm. Lond.* & *Edinb.* Majorana vulgaris. *Bauh. Pin. p.* 224. *Raii Hist. p.* 538. Majorana vulgaris æstiva. *Park. Theat. p.* 11. Majorana major. *Gerard Emac. p.* 664.

Class Didynamia. *Ord.* Gymnospermia. *Lin. Gen. Plant.* 726.

Ess. Gen. Ch. *Strobilus* tetragonus, spicatus, calyces colligens.

Sp. Ch. O. foliis ovatis obtusis, spicis subrotundis compactis pubescentibus.

THE root is perennial, brown, and furnished with many long tough fibres: the stalks are numerous, woody, branched, square, and rise a foot and an half in height: the leaves are egg-shaped, obtuse, downy, entire, of a pale green colour, and stand in pairs upon footstalks: the flowers are small, white, and appear successively between the bracteal leaves, which are numerous, and form round compact terminal spikes: the calyx is tubular, and divided at the brim into five pointed segments: the corolla consists of a funnel-shaped tube, divided at the limb into two lips, of which the uppermost is erect and roundish; the undermost is cut into three pointed segments: the other parts of fructification resemble those of O. vulgare. The flowers appear in August.

This plant is thought to be the Σαμψυχον or Amaracus of the ancients:[a] it has been long cultivated in our gardens, and in frequent use for culinary purposes; but the place of which it is a native has not yet been made known.

The leaves and tops of Marjoram have a pleasant smell, and a moderately warm aromatic bitterish taste. They yield their virtues both to aqueous and spirituous liquors by infusion, and to water in distillation, affording also a considerable quantity of essential oil, amounting, according to Beaumé, to fifteen ounces from one hundred and fifty pounds of the recent plant. This oil, on being long kept, assumes a solid form.

[a] The Amaracus is noticed both by Virgil and Catullus:

——— ubi mollis amaracus illum
Floribus et dulci aspirans complectitur umbrâ. *Æn. lib. i. v.* 698.

Cinge tempora floribus
Suave olentis amaraci. *Juliæ et Manlii Epithal.*

Thymus vulgaris.

Published by W. Phillips, Jan.ry 1st 1808.

The medicinal qualities of this plant agree with those of its congener, Wild Marjoram; but being much more fragrant it is deemed to be more cephalic, and better adapted to those complaints known by the name of nervous; and may be therefore employed with the same intentions as lavender. It is directed in the composition of the pulvis sternutatorius by both Pharmacopœias, with a view to the agreeable odour which it diffuses to the asarabacca rather than to its errhine power, which is very considerable.

In its recent state, we are told, that it has been successfully applied to scirrhous tumours of the breasts.[b]

[b] Cohausen in *Comm. Nor. a.* 1742. p. 151.

THYMUS VULGARIS. COMMON GARDEN THYME.

SYNONYMA. Thymus. *Pharm. Edinb.* Thymus vulgaris folio tenuiore. *Bauh. Pin. p.* 219. *Tourn. Inst. p.* 196. Thymum durius. *Dod. Pempt. p.* 275. *Gerard Emac. p.* 573. *Raii Hist. p.* 521. *Park. Theat. p.* 7.

α Thymus vulgaris folio tenuiore. *C. B.*
Narrow-leav'd Garden Thyme.

β Thymus vulgaris folio latiore.* *C. B.*
Broad-leav'd Garden Thyme. *Hort. Kew.*

Class Didynamia. *Ord.* Gymnospermia. *Lin. Gen. Plant.* 727.

Ess. Gen. Ch. *Calycis* bilabiati faux villis clausa.

Sp. Ch. T. erectus, foliis revolutis ovatis, floribus verticillato spicatis.

* This is the variety to which the figure and description here given apply.

THE root is perennial, woody, and subdivided into small fibres: the stems are numerous, round, hard, branched, and usually rise about a foot in height: the leaves are small, narrow, elliptical, and stand in pairs upon very short footstalks: the flowers terminate the branches in whorls or round clusters: the calyx is tubular, striated, closed at the mouth with small hairs, and divided into two lips; of these the uppermost is cut into three teeth, the lowermost into two: the corolla is monopetalous, consisting of a tube, which is about the length of the calyx, and divided at the brim into two lips, of a pale purple colour; the *upper lip* is erect, or turned back, and notched at the end; the *under lip* is longer, expanding, and divided into three segments; of these the middle segment is the broadest: the filaments are two long, and two short: the antheræ small and round: the germen is divided into four parts, from the centre of which issues the style, which is thread-shaped, and furnished with a bifid stigma: the seeds are four, small, roundish, and lodged at the bottom of the calyx. It is a native of the South of Europe, and flowers from May till August.

According to C. Bauhin, this plant is the Θυμος of Dioscorides and Theophrastus.[a] It grows wild abundantly in the mountainous parts of Italy and Spain; we are therefore the more induced to suppose it to be the plant of this name so frequently mentioned by the Latin poet.[b] It was cultivated by Gerard, and usually finds place in our gardens with the other pot-herbs.

This herb has an agreeable aromatic smell, and a warm pungent taste. "To water it imparts, by infusion, its aromatic odour, but only a weak taste: in distillation, it gives over an essential oil, in quantity about an ounce, from thirty pounds of the herb in flower;

[a] "Dioscorid. L. 3. c. 44. Theophrast. 4. hist. 7. & 6. hist. 2. 1. caus. 5. απο τε θυμα, quod iis qui animi deliquium patiuntur adhibeatur: alii απο της θυμασεος και της θυης deducunt, quod hoc veteres in sacris, quæ igne accenso fiebant, primum usi sint, ut apud Rhodiginum, L. 3. c. 23. legere est."

[b] 'Nerine Galatea, thymo mihi dulcior Hyblæ.' Both this species and the Serpyllum are probably alluded to; they are equally fragrant, and coveted by bees.

of a gold yellow colour if distilled by a gentle fire, of a deep brownish red if by a strong one, of a penetrating smell, resembling that of the Thyme itself, in taste excessively hot and fiery: the remaining decoction inspissated, leaves a bitterish, roughish, subsaline extract. The active matter, which by water is only partially dissolved, is by rectified spirit dissolved completely, though the tincture discovers less of the smell of the Thyme than the watery infusion: the spirit brings over, in distillation, a part of its flavour, leaving an extract of a weak smell, and of a penetrating camphorated† pungency."[c]

By Bergius the virtues of Thyme are said to be resolvent, emmenagogue, diuretic, tonic, and stomachic;[d] but we find no disease mentioned in which its use is particularly recommended either by him or other writers on the Materia Medica. As agreeing in common with the natural order of verticillatæ, its aromatic qualities may be found equally useful in some of those complaints for which lavender, sage, rosemary, &c. are usually employed.

[c] Lewis, *M. M. p.* 650.

† This plant seems actually to contain a species of camphor, thus noticed by Murray: Camphoræ speciem continet herba, quæ sese declaruit mox post destillationem ejus cum aqua, dum oleum ab ea separaretur, tam in gossypio quam orificio vitri, crystallis exiguis, dein post aliquot dierum moram in fundo vitri crystallis, avellanæ nucis adeo magnitudinis, cubicis, saccharo candi similibus." *App. Med. vol. ii. p.* 125. These with the odour of Thyme, had in every other respect the qualities of camphor. See *Phil. Trans. vol. xxxiii. p.* 321. *sqq. & p.* 361.

[d] *M. M. p.* 536.

THYMUS SERPYLLUM. WILD, or MOTHER of THYME.

SYNONYMA. Serpyllum. *Pharm. Edinb.* Serpyllum vulgare minus *Bauh. Pin. p.* 220. *Park. Theat. p.* 8. Serpyllum vulgare. *Gerard Emac. p.* 570. *Raii Hist. p.* 521. *Synop. p.* 230. Thymus foliis ovatis ad basin ciliatis. *Hal. Stirp. Helv. n.* 235. Thymus Serpyllum. *Hudson. Flor. Ang. p.* 229. *Withering. Bot. Arrang. p.* 623. *Curt. Flor. Lond.*

α Serpyllum vulgare minus. *C. B.*
Common smooth Mother of Thyme.

β Serpyllum foliis citri odore. *C. B.*
Lemon Thyme.

γ Serpyllum villosum fruticosius, floribus dilute rubentibus. *Ray Synop.* *Hoary Mother of Thyme.*

δ Serpyllum angustifolium hirsutum. *C. B.*
Hairy Mother of Thyme. See *Hort. Kew.*

Class Didynamia. *Ord.* Gymnospermia. *Lin. Gen. Plant. 727.*

Ess. Gen. Ch. *Calycis* bilabiati faux villis clausa.

Sp. Ch. T. floribus capitatis, caulibus repentibus, foliis planis obtusis basi ciliatis.

THE root is perennial, woody, fibrous, and of a brown colour: the stems are numerous, hard, square, branched, procumbent, and rise from four inches to a foot in height: the flowers are of a purplish colour, and stand in whorls towards the top of the stem and branches: the leaves are ovate, entire, smooth, beset with

Thymus Serpyllum.

numerous small glands, fringed with hairs towards the base, and stand in pairs upon very short footstalks: the calyx, the corolla, and sexual parts, correspond with those mentioned of the Thymus vulgaris. It is a native of Britain, affecting heaths and mountainous situations, flowering in July and August.

It is observed by Mr. Curtis, that "few plants are subject to so many varieties as the Wild Thyme. In its most natural state, when found on dry exposed downs,[a] it is small and procumbent: when growing among furze or other plants, which afford it shelter, it runs up with a slender stalk to a foot or more in height, and assumes an appearance which might puzzle the young botanist." The specimen, from which the drawing for the annexed plate was taken, grew in a situation which subjected it to neither of these extremes; but it has been so far sheltered as to participate more of the character of the latter than the former. This plant has the same sensible qualities as those of the garden thyme, but has a milder, and rather more grateful flavour. "Its essential oil is both in smaller quantity, and less acrid, and its spirituous extract comes greatly short of the penetrating warmth and pungency of that of the other." From this it appears, that the Serpyllum, though possessing similar qualities, is evidently less medicinal than the foregoing species.

[a] It has been a received opinion, that this and other aromatic herbs give a flavour to the flesh of sheep that feed where these plants abound: but it is well known that sheep refuse these aromatics when they have a choice of other pasturage. *Curt.* See Account of Sheep Walks in Spain. *Gent. Mag.* 1764.

SALVIA OFFICINALIS. GARDEN SAGE.

SYNONYMA. Salvia. *Pharm. Lond. & Edinb.* Salvia major. *Gerard Emac. p.* 764. *Dodon. Pempt. p.* 288. *Bauh. Pin. p.* 237. Salvia major vulgaris. *Park. Theat. p.* 49. Salvia latifolia. *Bauh. Hist. iii. p.* 304. *Raii Hist. p.* 509. Σφακιλος *Theophrast. &* Ελελισφακος *Dioscoridis* existimatur esse.

Varietates,

α Salvia major. *C. Bauh. Aliorumque, s. c.*
Common, or Greater Garden Sage.

β Salvia minor, aurita et non aurita. *Bauh. Pin.* 237. Salvia minor, seu angustifolia, *Auctorum.*
*Small Sage, or Sage of Virtue.**

Class Diandria. *Ord.* Monogynia. *L. Gen. Plant.* 37.

Ess. Gen. Ch. *Cor.* inæqualis. *Filamenta* transverse pedicello affixa.

Sp. Ch. S. foliis lanceolato-ovatis integris crenulatis, floribus spicatis, calycibus acutis.

THE root is perennial, long, and fibrous; the stalk is shrubby, square, firm, divided into many branches, and rises above two feet in height: the leaves are oblong, rough, crenulated, or finely notched at the edges, generally of a reddish or purplish tinge, and stand in pairs upon long footstalks: the flowers appear in June, and terminate the branches in long spikes, they are of a blue colour, monopetalous, tubular, and separate at the extremity into two lips; the upper lip is entire and concave, the lower divides

* Both these varieties are used medicinally; and the narrow leaved sage is by many preferred to the broad.

Salvia officinalis

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into three roundish lobes, of which the middle one is the largest: the calyx is tubular, large, reddish, striated, bilabiated, and cut into acute segments; the two filaments are short, and crossed transversely by two others affixed to them; the antheræ are large and yellow; the style is long, filiform, of a blue colour, and the stigma is bifid; the seeds are four, roundish, naked, and placed at the bottom of the calyx.

Sage is indiginous to the southern parts of Europe, and was cultivated in this country by Gerard, who first published a figure of this plant in the year 1597, and it is now a constant inhabitant of the kitchen garden: it has a fragrant strong smell, and a warm bitterish aromatic taste, like other plants containing an essential oil; it gives out its properties more perfectly to spirituous than to aqueous menstrua. In ancient times sage was celebrated as a remedy of great efficacy;[a] but, at present, few practitioners consider it as an article of much importance in the Materia Medica; and although frequently employed as a sudorific, it seems to have no advantage over other plants, whose aromatic flavour renders the fluid in which they are infused more acceptable to the stomach; and by some it has been successfully used even for the purpose of restraining inordinate sweating.[b] As possessing a small share of

[a] **"Cur moriatur homo cui salvia crescit in horto?**
Contra vim mortis non est medicamen in hortis."
— **"Salvia salvatrix naturæ conciliatrix."**
— **"Salvia cum ruta faciunt tibi pocula tuta."**

"Efficacia et nomen herbæ dedit (a salvando) et cumulum laudum attulit, in tremore artuum, paralysi, obstructione menstruorum, fluore albo, arthritide & rheumatismo, morbis contagiosis, apthis, ulceribus, aliisque multis morbis, quorum nomina colligere absque testium fide non interest."——*Murray Ap. Med.* vol. 2. p. 167.

[b] Infused in wine or spirit, Van Swieten found it remarkably efficacious in stopping night sweats. Vide *Comment.* tom. 2. p. 370.—Quarin remarks, that a strong infusion of sage in water was experienced to be equally successful. *Method. med. febr.* p. 37.—Baron Van Swieten also found it useful in restraining the improper continuing of a flow of milk from the breasts of women, after they had weaned their children. *Com.* tom. 4. p. 645.

aromatic and astringent power, it may prove a serviceable tonic in some cases of debility of the stomach and nervous system: the Chinese, who are said to have experienced the good effects of sage in this way, value it highly, and prefer it to their own tea. The power of this plant, in resisting the putrefaction of animal substances, has also been adduced in proof of its medicinal efficacy.[c]

[c] From the experiments of Etlinger, it is discovered to have a considerable share of antiseptic power. Vide *Comment. de Salvia*, p. 16.

BETONICA OFFICINALIS. WOOD BETONY.

SYNONYMA. Betonica. *Pharm. Geoff. iii.* 183. *Dale.* 151. *Alston. ii.* 88. *Lewis.* 146. *Edinb. New. Disp.* 146. *Murray. ii.* 158. *Bergius.* 524. *Cullen. ii.* 145. Betonica purpurea. *Bauh. Pin.* 235. *Gerard. Emac.* 714. *Raii. Synop.* 238. *Hall. Stirp. Helv.* 264. *Park. Theat.* 238. B. officinalis. *Hudson. Flor. Ang.* 258. *Withering. Bot. Arr.* 611. *Ic. Flor. Dan.* 726. *Flor. Lond.* 154.

Didynamia Gymnospermia. *Lin. Gen. Plant.* 718.

Gen. Ch. *Cal.* aristatus. *Corollæ* lab. super. adscendens, planiusculum. *Tubus* cylindricus.

Sp. Ch. B. spica interrupta, corollarum labii lacinia intermedia emarginata.

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ROOT perennial, tapering, woody, brownish, furnished with long white fibres. Stalks usually more than a foot in height, erect, square, simple, channelled towards the top, nearer the base hairy. Lower leaves on footstalks, cordate, or lance-shaped, notched, obtuse, veiny, somewhat hairy, and wrinkled: upper leaves narrower, opposite, reflexed. Flowers purple, in spikes composed of several whorls. Bracteæ abundant, placed under the flowers, of the length of the calyx. Calyx permanent, tubular, divided at the edge into five narrow teeth. Corolla monopetalous; tube longer than the calyx, bending inwards, below smooth and white, above purple, downy: upper lip roundish, entire, erect; lower one divided into three segments, of which the middle one is the broadest. Filaments four, longer than the tube, two long and two short, furnished with purple antheræ. Germen divided into four parts. Style tapering, white, longer than the filaments, and terminated by a bifid stigma. Seeds four, of an irregular shape, and lodged in the calyx.

It is common in woods and heaths, flowering in August and September.

The description of the Βετονικη by Dioscorides applies equally to many of the other verticillated plants: he also states it to be purgative, so that it seems very doubtful if by that name he meant the plant here figured.

The leaves and tops of the Betony have an agreeable but weak smell: to the taste they discover a slight warmth, accompanied with some degree of astringency and bitterness. They yield very little essential oil, insomuch that only a few drops can be obtained from a large quantity of the herb.

Betony, like many other plants formerly in great medical estimation, is at this time almost entirely disregarded. Antonius Musa, physician to the Emperor Augustus, filled a whole volume with enumerating its virtues, stating it as a remedy for no less than forty-seven disorders; and hence in Italy arose this proverbial compliment *You have more virtues than Betony.*[a]

[a] The Italians also introduced the maxim *Vende la tonica et compra la Betonica*

Simon Paulli also ascribes to it powers, which may be considered as rather miraculous than natural, and which did not seem to require contradiction from the experiments of Alston.[b]

Modern writers do not allow the Betony to possess any considerable efficacy: Scopoli indeed says that he experienced its cephalic and corroborant effects; but its sensible qualities show it to be more inert than most of the other verticillatæ. Both this plant and Eyebright enter into the composition of Rowley's British herb tobacco and snuff.

[b] See *Alston. l. c.*

[c] *Flor. Carn. Ed.* 1. *p.* 460.

ORIGANUM DICTAMNUS. DITTANY of CRETE.

SYNONYMA. Dictamnus creticus. *Pharm. Geoff. ii.* 272. *Dale.* 148. *Alston. ii.* 129. *Lewis.* 274. *Edinb. New Dispens.* 183. *Murray. ii.* 139. *Bergius.* 529. *Bauh. Pin.* 222. *Park. Theat.* 27. *Ray. Hist.* 537. *Ger. Emac.* 795.

Didynamia. Gymnospermia. *Lin. Gen. Plant.* 762.

Gen. Ch. ***Strobilus*** tetragonus, spicatus, calyces colligens.

Sp. Ch. O. foliis inferioribus tomentosis, spicis nutantibus.

ROOT fibrous, perennial. Stalk about a foot in height, branched, downy, ligneous. Leaves ovate, blunt, opposite, on short footstalks, thick, covered with soft white hairs. Flowers purple, in spikes. Bracteæ roundish, smooth, coloured, numerous, forming quadrangular spikes. Calyx small, five-toothed, concealed by the bracteæ. Corolla monopetalous, consisting of a long tube, divided at the limb into two lips, of which the upper is straight, and en-

Origanum Dictamnus

closes the filaments: the under lip is cut into three obtuse lobes, of which the middle one is the largest. Filaments two long and two short, filiform, longer than the corolla, and furnished with simple antheræ. Germen divided into four parts. Style slender. Stigma bifid. Seeds four, of an irregular ovate shape, and lodged at the bottom of the calyx.

It flowers from June till August.

This plant, which is a native of the Island of Candia, appears from Turner to have been cultivated in Britain previous to the year 1568, by Mr. Riche. The specimen here delineated grew in the Royal garden at Kew.

The leaves of this plant are apparently very warm and aromatic; of an agreeable smell, and hot biting taste. They impart their virtues both to water and rectified spirit. Distilled with water, they give over a moderately strong impregnation to the aqueous fluid; from which, if the quantity of Dittany be large, there separates, as Neuman observes, a small portion of a yellowish essential oil, of a highly pungent aromatic taste and smell, and which congeals in the cold into the appearance of camphor.[a]

Both the Greek and Roman writers have fabled this plant into great celebrity; of which a single instance, related by the Latin Poet, affords a beautiful illustration.[b]

Though rarely used at this day, it certainly possesses, in a very considerable degree, the stimulant and aromatic qualities which characterize this class of plants; and has at least an equal share of emmenagogue, carminative, and stomachic virtue.

[a] *Lewis. l. c.*

[b] Hic Venus, indigno nati concussa dolore,
Dictamnum genitrix Cretæâ carpit ab Idâ,
Puberibus caulem foliis, et flore comantem
Purpureo: non illa feris incognita capris
Gramina, cùm tergo volucres hæsêre sagittæ.
ÆN. L. XII. 411.

TEUCRIUM CHAMÆDRYS. COMMON GERMANDER.

SYNONYMA. Chamædrys. *Pharm. Geoff. iii.* 296. *Dale.* 145. *Alston. ii.* 105. *Lewis.* 219. *Cullen. ii.* 8. *Ed. New. Dispens.* 169. *Murray. ii.* 119. *Bergius.* 506. Chamædrys minor repens. *Bauh. Pin.* 148. *Ger. Emac.* 656. Chamædrys vulgaris. *Park. Theat.* 104. *Ray. Hist.* 527. *Synop.* 231. *Hudson. Flor. Ang.* 248. *With. Bot. Arr.* 592. *Ic. Flor. Dan. p.* 448.

Didynamia Gymnospermia. *Lin. Gen. Plant.* 706.

Gen. Ch. *Corollæ* labium superius (nullum) ultra basin 2-partitum, divaricatum ubi stamina.

Sp. Ch. T. foliis cuneiformi-ovatis incisis crenatis petiolatis, floribus ternis, caulibus procumbentibus subpilosis.

ROOT perennial, branched, fibrous. Stalk about a foot in height, decumbent, roundish, branched, rough. Leaves in pairs, on foot-stalks, ovate, narrow, irregularly toothed, veined, hairy. Flowers purple, placed in whorls at the alæ of the leaves. Calyx rough, quinquifid. Segments pointed. Corolla consists of a short curved tube, at the limb divided into two lips, of which the upper is short, and cut in the middle in such a manner as to disapper: the lower lip separates into spreading lobes, of which the middlemost is large, and of a roundish form. Filaments two long and two short, slender, white, and furnished with simple antheræ. Germen four, parted. Style filiform. Stigma bifid. Seeds four, enclosed in the calyx.

It is a native of England, flowering in June and July. The annexed figure is taken from a garden specimen.

The leaves and tops of Germander have a moderately bitter taste, accompanied with a weak aromatic flavour, which is diminished but not totally dissipated when the plant is dried. They give out their virtues both to watery and spirituous menstrua. Water seems to

Teucrium Chamædrys

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dissolve the bitter matter more perfectly than pure spirit, the watery extract being stronger in taste than the spirituous;[a] though the quantity of both extracts, according to Cartheuser's experiments, is very nearly alike.

The Chamædrys has been esteemed chiefly in the character of a mild aperient and corroborant: it is recommended in uterine obstructions,[b] intermitting fevers,[c] and in the rheumatism and gout. Of the last mentioned complaint, Charles the Vth is said to have been cured by a vinous decoction of this, with some other herbs, taken daily for sixty successive days.[d]

Other and less equivocal evidence of the good effects of the Chamædrys, in this disorder, are recorded by different authors, who appear to have employed it in various forms and combinations, of which the celebrated antiarthritic, or Portland powder, is an instance.

According to Murray the virtues of this plant should be nearly allied to those of the Marrubium, and therefore promises to be equally useful in asthmatic affections, coughs, and infarctions of the lungs. However, while we admit this conclusion, we consider the virtues of both as somewhat problematical.

[a] *Lewis. l. c.* [b] See *Ray. l. c.*

[c] *Alpinus. Med. Ægypt. p.* 316. *Riverius. Observ. Cent.* 4.—82. *Chomel. Us. ii.* 139. *Seguier. Pl. Veron. T. i. p.* 319. [d] *Vesal. Rad. Chin.* 111.

Many other medicinal plants of the order VERTICILLATÆ still remain unnoticed: but considering the great number of this class here figured, it has been thought that the medical reader will not regret the suppression of the following:

LIN. NAME.	OFFICINAL.	ENGLISH.
Ajuga pyramidalis	Consolida media	Mountain Bugle
Teucrium creticum	Polium creticum	Poley of Candia
..... Chamæpitys	Chamæpitys	Ground pine
..... Montanum	Polium montanum	Mountain poley
Melittis Melissophyllum	Melissophyllum	Bastard balm
Melissa Calamintha	Calamintha	Calamint
Lavendula Stoechas	Stoechas	French Lavender
Satureja hortensis	Satureja	Summer Savory
Nepeta Cataria	Nepeta	Catmint
Origanum creticum	Origanum creticum	Marjoram of Candia
Salvia Sclarea	Sclarea	Clary
Leonurus Cardiaca	Cardiaca	Mother-wort
Prunella vulgaris	Prunella	Self-heal
Lamium album	Lamium album	Dead-nettle

ORD. XX. PERSONATÆ.

(From *Persona*, a masque.)

Plants having irregular monopetalous flowers, assuming a gaping or grinning appearance.

GRATIOLA OFFICINALIS. HEDGE-HYSSOP.

SYNONYMA. Gratiola. *Pharm. Lond. & Edinb. Gerard. Emac. p.* 518. *Raii Hist. p.* 1885. *Dodon. Pempt. p.* 358. *Hal. Stirp. Helv. n.* 329. Gratiola, Gratia Dei. *Lob. Hist. p.* 238. *Chab. p.* 475. Gratiola centauroides. *Bauh. Pin. p.* 279. Gratiola vulgaris. *Park. Theat. p.* 220. Gratiola officinalis. *Flor. Dan. t.* 363.

Class Diandria. *Ord.* Monogynia. *Lin. Gen. Plant.* 29.

Ess. Gen. Ch. *Cor.* irregularis, resupinata. *Stamina* 2-sterilia. *Caps.* 2-locularis. *Cal.* 7-phyllus: 2 exterioribus patulis.

Sp. Ch. G. foliis lanceolatis serratis, floribus pedunculatis.

THE root is perennial, cylindrical, white, jointed, and furnished with many slender fibres: the stalk is simple, erect, round, thick, and rises nearly a foot in height: the leaves are lance-shaped, long, pointed, serrated towards the extremities, and stand in pairs, without footstalks: the flowers proceed from the base of the leaves,

Gratiola officinalis

Published by W. Phillips, March 1.1801.

and appear in June and August; they are tubular, and divided at the limb into four obtuse irregular segments, of a pale purple colour: the tube is yellow, and intermixed with reddish streaks: the pedu ncles are slender, of a red colour, and support a single flower: the calyx consists of five or six elliptical pointed segments: the filaments are four, two of which only are furnished with antheræ: the style is tapering, straight, with a divided stigma: the germen becomes an oval pointed capsule, separated into two cells, which contain many small seeds. It is a native of the South of Europe, and grows usually in wet meadows.

Kostrzewski, who wrote professedly upon the virtues of this plant,[a] supposes Matthiolus to be the first botanist by whom it is mentioned; and the first account of its cultivation in Britain is that given by Turner in 1568:[b] and it now has a place in most of our botanical gardens. It has a strong bitter nauseous taste, but little or no odour; and its virtues are extracted more perfectly by aqueous than by spirituous menstrua.

It has been observed, that Gratiola resembles Digitalis both in the shape of its flowers, and in its medicinal effects; and hence it has been called Digitalis minima. It is certainly a powerful and active cathartic, and operates with such violence upon the stomach, as generally to induce vomiting;[c] and on this account it is thought by Chomel to be a medicine adapted only to the more vigorous and robust constitutions.[d] Many others, however, recommend the

[a] Diss. de Gratiola, *Viennæ*, 1775. Vide page 8.

[b] Turn. Herb. *cited in the Hort. Kew.*

[c] Vide Conr. Gesner. *Epist. Med. Lib.* 3. Dodon. *Pempt. p.* 361. Boerhaave *Hist. Pl. Hort. L. B.* Bergius *Mat. Med. p.* 26. These observations apply to this plant both in its recent and dried state.

[d] *Usuell. t.* 1. *p.* 48. Succus nimirum expressus et inspissatus ad dosin 24 vel 30 granorum blande purgat absque vomitu, sed lotium efficaciter pellit. Extractum verò ex residuo post expressionem aqua erutum et amarius est, et eadem dosi violentius purgat Boulduc. *Mem. de l'Acad. R. d. sc.* 1705. *p.* 189. Vide Murray, *Ap. Med. vol.* 2. *p.* 200.

Gratiola as a perfectly safe and useful purgative, declaring their repeated experience of its efficacy, without ever observing any bad consequence to follow its use. But as it is very uncertain in its effects, the employment of this medicine requires the precaution of a gradual increase of its dose. This plant has commonly been used in hydropical diseases; and in moderate doses it is said not only to act as a hydragogue, but also to manifest a diuretic character;[e] and instances of its good effects in ascites and anasarca, are related by many respectable practical writers.[f] Gesner and Bergius found a scruple of the powder a sufficient dose, as in this quantity it frequently excited nausea or vomiting; others have given it to half a dram, two scruples, a dram, and even more.[g]

An extract of the root of this plant is said to be more efficacious than the plant itself, and exhibited in the dose of half a dram or a dram in dysenteries, produces the best effects.[h] We are likewise told by Kostrzewski,[i] that in the Hospitals at Vienna, three maniacal patients were perfectly recovered by its use; and in the most confirmed cases of lues venerea it effected a compleat cure: it usually acted by increasing the urinary, cutaneous, or salivary discharges.

[f] Heurn. *Prax. Med. p.* 332. Camerar. *Hort. Med. &c. p.* 69. Ettmul. *Oper. tom.* 1. *p.* 716. Heluicb. *Misc. Nat. Cur.* Dec. 3. A. 5. et 6 obs. 67. *p.* 133. Joel. *Oper. Med. tom.* 4. *lib.* 4. Hartm. *Oper. Med. Chym. p.* 60.

[g] Chomel gave half a dram, Hermann two scruples. Many employed the fresh plant in decoction with the addition of cinnamon, mace, ginger, aniseeds, liquorice, &c. See Geoffroy (M. M.) and others.

[h] Boulduc l. c. Kramer *Tent. Bot. p.* 18. where it is said to have similar effects to those of ipecacuanha.

[i] *Diss. cit. p.* 64.

Veronica Beccabunga.

Published by W. Phillips, March 23rd 1808.

VERONICA BECCABUNGA. BROOKLIME SPEEDWELL.

SYNONYMA. Becabunga, *Pharm. Lond. Curt. Flor. Lond.*
Veronica foliis ovatis serratis glabris ex alis racemosa, *Hal. Stirp. Helv.* n. 534. Anagallis Aquatica vulgaris sive Becabunga, *Park. Theat.* 1236. Anagallis Aquatica minor, folio subrotundo. *Bauh. Pin.* 252. Anagallis seu Becabunga. *Gerard,* 620.

Class Diandria. *Ord.* Monogynia. L. *Gen. Plant.* 25.

Ess. Gen. Ch. *Cor.* Limbo 4-partito, lacinia infima augustiore. *Capsula* bilocularis.

** *Corymboso-racemosæ.*

Sp. Ch. V. racemis lateralibus, fol. ovatis planis, caule repente.

THE root is perennial, creeping, jointed, and from each joint sends forth many long slender fibres; the leaves are thick, oval, smooth, obtusely serrated, of a pale-green colour, and stand upon the stem in pairs, either sessily, or upon very short footstalks; the stem is round, jointed, creeping, smooth, succulent, often of a reddish brown colour, and from eight to twelve inches high; the racemi or flower spikes, are lateral, opposite, bracteated, and terminated by the flowers, which are of a faint blue colour, and divided into four small roundish leaves; the calyx is quadripartite. This plant is very common in ditches and shallow streams.

The leaves and stem of Brooklime have a bitterish subastringent taste, but manifest little or no acrimony, nor any peculiar odour: by chemical experiments they appear to be subacid, and possess some degree of astringency; these qualities, however, are common to almost all fresh vegetables, and afford no proof of their medical powers.

This plant was formerly considered of much use in several diseases, and was applied externally to wounds and ulcers; but if it have any peculiar efficacy, it is to be derived from its antiscorbutic virtue. As a mild refrigerant juice it is preferred where an acrimonious state of the fluids prevails, indicated by purient eruptions upon the skin, or in what has been called the hot scurvy; it is ordered in the London Pharmacopœia as an ingredient in the succus cochliariæ compositus, probably with a view to correct the pungency of the cress. Rutty says, "Succus ejus saponaceus est, "aperiens, & majori copia sumptus, alvum movet commodissime." We must, however, acknowledge, that we should expect equal benefit from the same quantity of any other bland fresh vegetable matter taken into the system. To derive any advantage from it, the juice ought to be used in large quantities, or the fresh plant eaten as food.

VERBENA OFFICINALIS. COMMON VERVAIN.

SYNONYMA. Verbena: *Pharm. Dale.* 148: *Alston. vol. ii.* 242. *Lewis.* 660. *Murray. ii.* 209. Verbena communis cæruleo flore. *Bauh. Pin.* 269. V. mas seu recta et vulgaris. *Park. Theat.* 674. V. communis. *Gerard. Emac.* 718. *Raii. Hist.* 535. *Synop.* 236. V. officinalis. *Hudson. Flor. Ang.* 505. *With. Bot. Arr.* 595. *Flor. Dan.* 628. *Flor. Lond. i.* 5.

Didynamia Gymnospermia.*

Gen. Ch. *Cor.* infundib. subæqualis, curva. *Calycis* unico dente truncato. *Semina* 2. s. 4. nuda. *Stam.* 2. s. 4.

* Linnæus places the Verbena in the class of diandria, dividing the different species into the *diandrous* and *tetrandrous;* but our English species, included among the latter, has also the characters of the fourteenth class, and is arranged accordingly by British botanists.

Verbena officinalis

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Sp. Ch. V. tetrandra, spicis filiformibus paniculatis, foliis multifido-laciniatis, caule solitario.

ROOT perennial, tapering, fibrous, of a yellowish colour. Stalks above a foot high, erect, tapering, obtusely quadrangular, beset with short prickles: the branches are opposite, slender, and simple. Leaves opposite, sessile, pinnatifid, or deeply and irregularly indented. Flowers numerous, purplish, placed in long slender spikes. Calyx small, tubular, five-toothed, angular, permanent. Corolla monopetalous, unequal: tube cylindrical, towards the top bent inward; limb expanding, divided into five segments, which are rounded, and nearly equal. Filaments extremely short: antheræ commonly four, two of which are placed above the others. Germen square: style thread-shaped, terminated by an obtuse stigma. Seeds usually four, oblong, obtuse, on the inside flattish, and white, and on the outside brown, convex, grooved, and reticulated.

Mr. Curtis observes that "the Vervain may be considered as a kind of domestic plant, not confined to any particular soil, but growing by the road sides, pretty universally at the entrance into towns and villages;" and Miller declares that it is never found more than a quarter of a mile from a house: hence it has been also called Simpler's Joy.

Ancient writers have distinguished this plant by the names Verbena, Verbenaca, and Peristerium.[a] It is destitute of odour, and to the taste manifests but a slight degree of bitterness and astringency.

In former times the Verbena seems to have been held sacred, and was employed in celebrating the sacrificial rites;[b] and with a view

[a] Vide *Plin. l.* 25. *c.* 9.

[b] It appears to be the Ιερα βοτανη, or περιστερεωνα of Dioscorides. Alston says, Verbena quasi herbena, because all herbs used in sacred rites were so called. Hence Virgil, Verbenasque adole pingues & mascula thura. *Ecl. viii. v.* 65. And Terence in Andria, Ex ara hac sume Verbenas tibi. But Virgil also uses the word to denote a particular plant. Vide *Georg. iv.* 131.

to this more than the natural power of the plant, it was worn suspended about the neck as an amulet. This practice, thus founded in superstition, was, however, in process of time, adopted in medicine; and therefore to obtain its virtues more effectually, the Vervain was directed to be bruised before it was appended to the neck; and of its good effects thus used for inveterate headachs, Forestus relates a remarkable instance.[c] In still later times it has been employed in the way of cataplasm, by which we are told the most severe and obstinate cases of cephalalgia have been cured; for which we have the authorities of Etmuller, Hartmann, and more especially De Haen.[d]

Notwithstanding these testimonies in favour of Vervain, it has deservedly fallen into disuse in Britain; nor has the pamphlet of Mr. Morley,[e] written professedly to recommend its use in scrophulous affections, had the effect of restoring its medical character. This gentleman directs the root of Vervain to be tied with a *yard of white sattin ribband* round the neck, where it is to remain till the patient recovers. He also has recourse to infusions and ointments prepared from the leaves of the plant; and occasionally calls in aid the most active medicines of the Materia Medica.

[c] *Oper. Omn. L. 9. Obs. 52.* [d] *De Haen Rat. Med. P. 6. p. 304.*

[e] See his Essay on Schrophula.

VERONICA OFFICINALIS. OFFICINAL VERONICA; Or, MALE SPEEDWELL.

SYNONYMA. Veronica. *Pharm. Dale.* 186. *Alston. ii.* 244. *Bergius.* 17. *Murray. ii.* 205. *Rutty.* 535. *Lewis.* 660. *Edinb. New Dispens.* 301. Veronica mas supina et vulgatissima. *Bauh. Pin.* 246. V. vera et major. *Gerard. Emac.* 626. V. mas vulgaris supina. *Park. Theat.* 550. *Raii. Hist.* 851. *Synop.* 281. *Hall. n.* 540. V. officinalis. *Hudson. Ang.* 4. *Lightf. Scot.* 27. *Withering. Bot. Arr.* 9. *Flor. Dan.* 248. *Flor. Lond. n.* 33.

Veronica officinalis

Published by W. Phillips, March 1, 1808.

Diandria Monogynia. *Lin. Gen. Plant.* 25.

Gen. Ch. *Cor.* Limbo 4-partito: lacinia infima angustiore. *Capsula* bilocularis.

Sp. Ch. V. spicis lateralibus pedunculatis, foliis oppositis, caule procumbente.

ROOT perennial, small, fibrous. Stalks about six inches in length, procumbent, creeping, firm, hairy, or woolly. Leaves oblong, obtuse, slightly serrated, or toothed, rough, placed in pairs, sessile, or on very short footstalks. Flowers purplish, in spikes, either terminal or axillary, each flower standing upon a short peduncle, supported by a linear bracteal leaf. Calyx divided into four segments, which are ovate, obtuse, and beset with glandular hairs. Corolla monopetalous, wheel-shaped, consisting of a short tube, terminated by a spreading limb, of a pale blue colour, and divided into four unequal portions. Filaments two, white, furnished with blue heart-shaped antheræ. Germen roundish, depressed, viscous, and at the base glandular, Style filiform, purplish, and furnished with a stigma, of a truncated appearance. Capsule irregularly heart-shaped, divided into two valves, containing numerous small brown compressed seeds.

It is not unfrequent on dry barren grounds, and heaths, as that of Hampstead, flowering in June and July.

" The leaves of Veronica have a weak not disagreeable smell, which in drying is dissipated, and which they give over in distillation with water, but without yielding any separable oil. To the taste they are bitterish, and roughish: an extract made from them by rectified spirit is moderately bitter and astringent."[a]

This plant, a century ago, was much recommended, especially in Germany, as a substitute for tea; and the French still distinguish it by the name of *Thé d'Europe.* But though this European tea has a roughness and a slight bitterness which is not ungrateful

[a] *Lewis. l. c.*

to the taste, yet these qualities are so unlike those which we discover in the foreign tea, that the extremely high price of the latter, at that time, must have been the chief reason for causing a contrary opinion, and of reconciling Europeans to a substitute so imperfect as the leaves of Veronica.

As a medicine also this plant has had a considerable share of fame. Francus[b] and Hoffmann[c] ascribe to it numerous virtues, the former calling it *Polychresta herba Veronica.* The disorders in which it has been esteemed most useful are those of the lungs, as coughs, asthmas, consumptions, &c. in which it is said not only to prove expectorant, but by its extraordinary vulnerary power to heal internal ulcers.

Its use has likewise been recommended by several authors in various other complaints requiring medicines of very different characters; but if we judge of the utility of the Veronica by its sensible qualities, it is only to be recognized as an astringent; and not sufficiently powerful as such to produce any considerable effect, and is therefore now disregarded by medical practitioners.

[b] Vide *Polychresta herba Veronica*, published in 1690.

[c] Vide Fr. Hoffmann in *Diss. de infusi Veronicæ efficacia præferenda herbæ Theæ*, Also *Haller. l. c.*

EUPHRASIA OFFICINALIS. COMMON EYEBRIGHT.

SYNONYMA. Euphrasia. *Pharm. Geoff. iii.* 454. *Dale.* 196. *Alston. ii.* 138. *Rutty.* 189. *Bergius.* 543. *Murray. ii.* 186. *Lewis.* 292. *Cullen. i.* 42. *Edinb. New Disp.* 187. Euphrasia officinarum. *Bauh. Pin.* 233. *Ger. Emac.* 663. *Park. Theat.* 1329. *Raii Hist.* 771. *Synop.* 284. Euphrasia officinalis. *Huds. Ang.* 268. *With. Bot. Arr.* 635. *Curt. Flor. Lond.* 335.

Didynamia Angiospermia. *Lin. Gen. Plant.* 741.

Euphrasia officinalis.

Published by W. Phillips, March 1.1806

Gen. Ch. *Cor.* 4-fidus cylindricus. *Caps.* 2-locularis, ovato-oblonga. *Antheræ* inferiores altero lobo basi spinosæ.

Sp. Ch. E. foliis ovatis lineatis argute dentatis.

ROOT annual, slender, divided, furnished with numerous minute fibres: stalk about three or four inches high, branched, round. somewhat hoary, reddish. Leaves sessile, opposite, ovate, deeply serrated, concave, rather hairy, and on the upper side marked with linear impressions. Flowers without peduncles, in racemi, arising at the alæ of the leaves. Calyx pentagonal, permanent, divided at the brim into four segments, which are unequal, of a dingy purplish colour, and beset with small glands. Corolla monopetalous, bilabiated, white: tube cylindrical, crooked, somewhat hairy, at the mouth yellowish: limb separated into two lips: upper lip erect, bifid, toothed, streaked with three purple lines: lower lip largest, divided into three emarginated lobes, of which those placed laterally are painted with purple streaks, and that in the middle tinged with yellow. Filaments four, tapering, purplish. Antheræ brown, bilobed, bearded with a few white hairs at the bottom. Germen egg-shaped, hairy. Style filiform, downy. Stigma blunt, fringed with minute glands. Capsule egg-shaped, notched at the end, divided into two cells, containing several whitish striated seeds.

It is common on barren meadows, heaths, and pastures, producing its flowers from July till September.

Eyebright, without any sensible odour, is somewhat bitterish and astringent, communicating a black colour to a solution of ferrum vitriolatum. It derives its name from its reputed efficacy in various disorders of the eyes, for which it was used both externally[a] and internally, and has long[b] been so much celebrated as to be con-

[a] The usual way of employing it as an external application was by mixing its juice with wine, and then adding a small quantity of honey.

[b] It is mentioned in this character by Gordon, (*Lilium Medicinæ. Fol.* 146. *ed.* 1305) Also by Arnoldus de Villa Nova, Sylvaticus, and others.

sidered almost in the character of a specific, the "*verum oculorum solamen.*"—But as there cannot possibly be a general remedy for all diseases of the eyes, the absurd and indiscriminate recommendation of Euphrasia as such, must receive but little credit from those who practice medicine on rational principles. It must be acknowledged however, that some authors have stated peculiar complaints of the eyes, in which the use of this plant was thought more remarkably evident; and, judging by these, we should say, that eyes weakened by a long continued exertion, and those that are dim and watery, as in a senile state, are the cases in which Euphrasia promises most advantage; nor are old people to despair, for according to Hildanus[c] and Lanzonus[d] several, at the age of seventy and eighty years, were recovered almost from entire blindness.

But though the great reputation which Eyebright formerly supported for several ages, must have induced some practitioners of later days to have tried its opthalmic power; yet we do not find a single instance of its efficacy recorded in modern times. How far this remark ought to invalidate the positive testimonies in its favour, we leave others to determine.[e]

The Icelanders are said to be in the constant habit of using the juice of Euphrasia in all affections of the eyes.[f]

In common with many other plants, the Euphrasia has also been recommended in the jaundice.

[c] *V. cent. epist. n.* 59.

[d] *Oper. Omn. ed.* 1738. *Tom.* 2. *p.* 394.

The character of Euphrasia was not unknown to Milton:

——— "then purged with euphrasy and rue,
The visual nerve, for he had much to see.

[e] Bergius says, "Ego ex propria experientia nihil certi de hac herba adhuc scio, sed tamen non spernenda arbitror testimonia priscorum."

[f] *Eggert Olafsen. Reise, &c. vol. i. p.* 433.

Antirrhinum Linaria

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ANTIRRHINUM LINARIA. COMMON TOAD-FLAX.

SYNONYMA. Linaria. *Pharm. Geoff. iii.* 730. *Dale.* 193. *Rutty.* 289. *Bergius.* 545. *Murray. ii.* 183. *Lewis.* 395. *Ed. New. Dispens.* 222. Linaria vulgaris lutea, flore majore. *Bauh. Pin.* 212. Linaria lutea vulgaris. *Gerard. Emac.* 550. L. vulgaris nostras. *Park.* 458. *Raii. Hist.* 752. *Synop.* 281. Antirrhinum Linaria. *Huds. Ang.* 238. *Withering. Bot. Arr.* 648. *Curt. Flor. Lond. i.* 5.

Didynamia Angiospermia. *Lin. Gen. Plant.* 750.

Gen. Ch. *Cal.* 5-phyllus. *Cor.* basis deorsum prominens, nectarifera. *Caps.* 2-locularis.

Sp. Ch. A. foliis lanceolato-linearibus confertis, caule erecto, spicis terminalibus sessilibus, floribus imbricatis.

ROOT perennial, woody, crooked, creeping, white, fibrous. Stalks round, erect, simple, tapering, smooth, from one to two feet in height. Leaves nearly linear, pointed, smooth, entire, thickly scattered over the stalk. Flowers large, yellow, and partly orange, crouded over each other in a terminal spike. Calyx divided into five small oval segments, of which the uppermost is the largest. Corolla monopetalous, bilabiated, or ringent, yellow, consisting of a short tube, and a limb composed of two lips; upper lip bifid, having its segments bending down, afterwards turned back, and closing together; lower lip divided into three segments, of which that in the middle is the least; the mouth is closed by a palate, which is bifid, prominent, villous at the bottom, and of a saffron colour. Filaments four, white, two long and two short, glandular at the base: antheræ yellow, bifid, joined in pairs. Germen round. Style filiform. Stigma clubbed. Capsule of a cylindrical form, opening by several divisions at the top, divided into two cells, containing numerous black irregularly shaped seeds.

It is frequent in barren pastures, hedges, and sides of roads, flowering from July till September.

The leaves of Linaria have a bitterish and somewhat saline taste, and when rubbed betwixt the fingers yield a faint smell, resembling that of elder. They are reported to be diuretic and cathartic, and in both characters to act so powerfully as to give names to this plant expressive of these qualities.[a] Hence they have been recommended internally in dropsies, and other disorders requiring copious evacuations. The Linaria has also been used as a resolvent in jaundice, and in such diseases as have been supposed to proceed from visceral obstructions. But the plant has been chiefly valued for its effects when externally applied, especially in hemorrhoidal affections;[b] for which both the leaves and flowers have been employed in the various forms of ointment, fomentation, and cataplasm.*

An infusion of the flowers is said to be very efficacious in cutaneous disorders; and Hammerin[c] gives an instance in which these flowers, with those of verbascum, used as tea, cured an exanthematous disorder, which had resisted various other remedies tried during the course of three years.

An Unguentum de linaria is to be found in the Wirtemburg, Brandenburg, and Danish Pharmacopœias.[d]

[a] Viz. *Urinalis, Harnkrout, Kreutterbuch.* [b] Vide *Horst. Obs. et. epist. med. lib. 4. obs. 50. Sim. Paulli. Bot.* 415. *Chesnau. Obs.* 360.

* See *Chomel. Pl. Usuell. Tom.* 3. 34. *Geoff. l. c.*

[c] Cited by *Murr. l. c.*

[d] The inventor of this ointment, for the piles, was a Dr. Wolph, who at that time was physician to the Landgrave of Hesse, by whom the doctor was continually interrogated to discover the composition of this ointment; but Wolph obstinately refused, till the prince promised to give him a fat ox annually for the discovery. Hence to the following verse, which was made to distinguish the Linaria from the Esula, viz.

"Esula lactescit, sine lacte Linaria crescit,"

The Hereditary Marshal of Hesse, added:

"Esula nil nobis, sed dat Linaria taurum." *Horst. l. c. a. Murr. cit.*

Linnæus (Flor. Suec.) says this plant is used as a poison for flies.

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VITEX AGNUS CASTUS. CHASTE-TREE.

SYNONYMA. Agnus Castus. *Pharm. Geoff. iii.* 44. *Dale.* 297. *Alston. ii.* 321. *Bergius.* 550. *Murray. ii.* 195. *Lewis.* 27. *Edinb. New Dispens.* 119. Vitex foliis angustioribus cannabis modo dispositis. *Bauh. Pin.* 475. Vitex sive Agnus castus. *Ger. Emac.* 1387. Vitex folio angusto. *Park. Theat.* 1437. Agnus folio non serrato. *Raii. Hist.* 1696.

Didynamia Angiospermia. *Lin. Gen. Plant.* 790.

Gen. Ch. *Cal.* 5-dentatus. *Cor.* limbus 6-fidus. *Becca* 4-sperma.

Sp. Ch. V. foliis digitatis serratis, spicis verticillatis.

THIS small tree or shrub divides into numerous branches; is covered with a greyish bark, and the young shoots are clothed with a downy substance. Leaves digitated, opposite, on long footstalks, separating into five or seven portions, which are long, narrow, elliptical, entire, pointed, on the upper side smooth, under side downy. Flowers purplish, on short peduncles, in whorled spikes. Calyx short, tubular, downy: margin irregular, toothed. Corolla monopetalous, ringent: tube short, cylindrical: limb divided into four segments, of which the undermost is the largest. Filaments four, two long, and two short, of the length of the tube, capillary. Antheræ vesatile. Germen roundish. Style filiform, about the length of the tube. Stigmata two, tapering, spreading. Capsule a roundish berry, divided into four parts, each containing a solitary ovate seed, of a blackish grey colour.

The Chaste-tree is a native of Sicily, affecting humid and shady places. It has long been introduced into the gardens of this country,* where it is found to brave the cold of winter in the open ground.

* It was cultivated here in 1570. *Lobel. Advers.* 423.

Miller says that he has seen it in full flower in October, when it made a beautiful appearance; but we have not been fortunate enough to meet with it in that state, and therefore had the annexed figure taken from a dried specimen in the Herbarium of Sir Joseph Banks.

The seeds, which have long been medicinally used, and were formerly received as an article of the Materia Medica, have a pungent acrid taste, and an unpleasant aromatic odour. These, from the days of Dioscorides, have been highly celebrated for possessing a power of subduing the inclination natural between the sexes. Hence the name Agnus castus;[a] and from being therefore thought more especially useful to those leading a monastic life, these seeds have been called Piper monachorum, or Monk's pepper. The seeds of the Chaste-tree are, however, so far from being thought antiaphrodisiac, that writers of later times have ascribed to them an opposite quality; and their aromatic pungency seems to favour this opinion, and also that of Bergius, who states them to be carminative and emmenagogue. We are aware that Lewis says, "the seeds in substance, as met with in the shops, have little taste, and scarcely any smell;" but Dr. J. E. Smith, who examined them in their recent state, observes, that "they have an unpleasant aromatic smell:"[b] it is therefore probable that on being long kept they lose much of their sensible qualities, nor is this to be regretted from any medical advantage they seem to promise in our Island; and the plant has been figured here rather with a view to illustrate this natural order, by its variety, than to serve the purposes of medicine.

We have now figured all the medicinal plants classed by Professor Murray in the order Personatæ, except Scrophularia nodosa and aquatica, Avicennia tomentosa, or Anacardium orientale, and

[a] Agnos, (i. e. castus) nominatur, quod, in Thosmophoriis (i. e. sacris Cereris) matronæ castitatem custodientes, eo ad strata uterentur: Lygos vero (quasi vimen) propter virgarum ipsius firmitatem. *Dioscor. l.* 1. *c.* 135. *Gal. Sim. vi. p.* 40. *and cited by Alston. l. c.*

[b] Sketch of a tour on the Continent. *vol. i. p.* 223.

Acanthus mollis. The two first are both natives of this country, and known by the names of Great or knobby-rooted Figwort, and Water Figwort. They have an ungrateful smell, resembling that of the Linaria, and like it also have been chiefly employed, with a view to their sedative and antiphlogistic effects, as an application to hemorrhoidal tumours. The synonyma of the Avicennia tomentosa *Syst. Veg.* are Bontia germinans *Sp. Pl.* Bontia foliis subtus tomentosis. *Jacq. Sel. Stirp. Amer.* Anacardium orientale *off.* The Malacca Bean.

Jacquin, however, contrary to the opinion of Linnæus, thinks that this tree, which is a native of both Indies, does not produce the Malacca Bean, but that the parent of this fruit is still undescribed. It may also be added, that the medicinal qualities of Anacardium orientale are not yet sufficiently ascertained.

Acanthus mollis, Smooth Acanthus, or Bear's-breech, or Branca ursina, of the foreign pharmacopœias, is a native of Italy and Sicily; and, as containing a mucilaginous matter, has been recommended in the character of an emollient and demulcent; but we do not find any instances of its efficacy recorded.

ORD. XXI. RHŒADES.

(From *Rhœas* the Red Poppy.)

Including the Poppy and other plants resembling it.

PAPAVER SOMNIFERUM. WHITE POPPY.

Opium Pharmacopœiarum plantæ capsularum succus densatus.

SYNONYMA. Papaver album. *Pharm. Lond. & Edinb.* Papaver hortense semine albo, & β Papaver hortense nigro semine. *Bauh. Pin. p.* 170. *Raii Hist. p.* 853. *Synop. p.* 308. Papaver sativum album. *Gerard. Emac. p.* 369. Papaver simplex album sativum. *Park. Theat. p.* 366. Papaver. *Hall. Stirp. Helv. n.* 1065. P. somniferum. *Hudson. Flor. Ang. p.* 231. *Withering. Bot. Arr. p.* 552. *Relhan. Flor. Cant. p.* 204. Μήκων *Græcis.*

Class Polyandria. *Ord.* Monogynia. *Lin. Gen. Plant.* 648.

Ess. Gen. Ch. *Cor.* 4-petala. *Cal.* 2-phyllus. *Capsula* 1-locularis, sub stigmate persistente poris dehiscens.

Sp. Ch. P. calycibus capsulisque glabris, foliis amplexicaulibus incisis.

THE root is annual, tapering, and branched: the stalk is round, smooth, erect, often branched, of a glaucous green colour, and rises two or three feet in height: the leaves are alternate, large, ovate, lobed, smooth, deeply cut into various segments, and closely em-

Papaver somniferum

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brace the stalk: the flowers are very large, terminal, and usually white or purplish: the calyx consists of two leaves, which are ovate, smooth, concave, bifid, and fall off on the opening of the flower: the corolla consists of four petals, which are large, roundish, entire, undulated: the filaments are numerous, slender, much shorter than the corolla, and furnished with oblong erect compressed antheræ: the germen is large, globular, and upon it is placed the stigma, which is large, flat, radiated, and forms a kind of crown: the capsule is one-celled, smooth, divided half way into many cells, which open by several apertures beneath the crown, and contain very numerous small white seeds. It is a native of England, usually growing in neglected gardens, or uncultivated rich grounds, and flowers in July and August.

This species is said to have been named White Poppy from the whiteness of its seeds; a variety of it however is well known to produce black seeds: the double-flowered white poppy is also another variety; but for medicinal purposes any of these may be employed indiscriminately, as we are not able to discover the least difference in their sensible qualities or effects.

The seeds, according to some authors, possess a narcotic power;[a] but there is no foundation for this opinion: they consist of a simple farinaceous matter, united with a bland oil, and in many countries are eaten as food. As a medicine, they have been usually given in the form of emulsion, in catarrhs, stranguaries, &c.

The heads or capsules of the Poppy, which are directed for use in the Pharmacopœias, like the stalks and leaves, have an unpleasant smell, somewhat like that of opium, and an acrid bitterish taste. Both the smell and taste reside in a milky juice, which more especially abounds in the cortical part of the capsules, and in its concrete state constitutes the officinal opium. These capsules are powerfully narcotic, or anodyne; boiled in water, they impart to the menstruum their narcotic juice, together with the

[a] Hermann, *Cynosur. Mat. Med. p.* 436. Junker, *Conspec. Ther. Gen. p.* 279.

other juices which they have in common with vegetable matters in general. The liquor, strongly pressed out, suffered to settle, clarified with whites of eggs, and evaporated to a due consistence, yields an extract which is about one-fifth or one-sixth of the weight of the heads. This possesses the virtues of opium, but requires to be given in double its dose to answer the same intention, which it is said to perform without occasioning a nausea and giddiness, the usual effects of opium. This extract was first recommended by Mr. Arnot;[b] and a similar one is now received in the Edinburgh Pharmacopœia. It is found very convenient to prepare the syrup from this extract, by dissolving one dram in two pounds and a half of simple syrup. The syrupus papaveris albi, as directed by both Colleges, is a useful anodyne, and often succeeds in procuring sleep, where opium fails; it is more especially adapted to children. White Poppy heads are also used externally in fomentations, either alone, or more frequently added to the decoctum pro fomento.

Opium, as we have already observed, is obtained from the heads or capsules of this species of Poppy, and is imported into Europe from Persia, Arabia, and other warm regions of Asia. The manner in which it is collected has been described long ago by Kæmpfer and others; but the most circumstantial detail of the culture of the Poppy, and the method of procuring the opium from it, is that given by Mr. Kerr, as practised in the province of Bahar: he says, "The field being well prepared by the plough and harrow, and "reduced to an exact level superficies, it is then divided into "quadrangular areas of seven feet long, and five feet in breadth, "leaving two feet of interval, which is raised five or six inches, "and excavated into an aqueduct for conveying water to every "area, for which purpose they have a well in every cultivated "field. The seeds are sown in October or November. The plants "are allowed to grow six or eight inches distant from each other. "and are plentifully supplied with water. When the young plants "are six or eight inches high, they are watered more sparingly.

[b] *Medical Essays & Obs. by a Society at Edinb. vol. 5. p. 108.*

" But the cultivator strews all over the areas a nutrient compost " of ashes, human excrements, cow dung, and a large portion of " nitrous earth, scraped from the highways and old mud walls. " When the plants are nigh flowering, they are watered profusely " to increase the juice.

" When the capsules are half grown, no more water is given, " and they begin to collect the opium.

" At sun-set they make two longitudinal double incisions * upon " each half-ripe capsule, passing from below upwards, and taking " care not to penetrate the internal cavity of the capsule. The " incisions are repeated every evening until each capsule has re- " ceived six or eight wounds; they are then allowed to ripen their " seeds. The ripe capsules afford little or no juice. If the wound " was made in the heat of the day, a cicatrix would be too soon " formed. The night-dews by their moisture favour the exstil- " lation of the juice.

" Early in the morning, old women, boys, and girls, collect the " juice by scraping it off the wounds with a small iron scoop, and " deposit the whole in an earthen pot, where it is worked by the " hand in the open sunshine, until it becomes of a considerable " spissitude. It is then formed into cakes of a globular shape, and " about four pounds in weight, and laid into little earthen basins " to be further exsiccated. These cakes are covered over with " the Poppy or tobacco leaves, and dried until they are fit for " sale. Opium is frequently adulterated with cow-dung, the ex- " tract of the Poppy plant procured by boiling, and various other " substances, which they keep in secresy."——" Opium is here " a considerable branch of commerce. There are about 600,000 " pounds of it annually exported from the Ganges."[c]

It appears to us highly probable, that the White Poppy might be cultivated for the purpose of obtaining opium to great advan-

* Kaempfer says, that in Persia, a five-pointed knife is used for making the incisions. *Amæn. Exot. Obs.* 15.

[c] See *Medical Observations and Inquiries*, *vol.* 5. *p.* 317.

tage in Britain. Alston says, " the milky juice, drawn by incision from Poppy-heads, and thickened either in the sun or shade, even in this country, has all the characters of good opium; its colour, consistence, taste, smell, faculties, phœnomena, are all the same; only, if carefully collected, it is more pure and more free of feculencies."[d]

Similar remarks have also been made by others, to which we may add those of our own; for during the last summer, we at different times made incisions in the green capsules of the White Poppy, from which we collected the juice, which soon acquired a due consistence, and was found, both by its sensible qualities and effects, to be very pure opium.

Opium, called also Opium Thebaicum, from being anciently prepared chiefly at Thebes, has been a celebrated medicine from the remotest times. It differs from the Meconium, which by the ancients was made of the expressed juice or decoction of the Poppies.[e]

Opium is imported into Europe in flat cakes, covered with leaves to prevent their sticking together: it has a reddish brown colour, and a strong peculiar smell: its taste, at first, is nauseous and bitter, but soon becomes acrid, and produces a slight warmth in the mouth: a watery tincture of it forms an ink, with a chalybeate solution. According to the experiments of Alston, it appears to consist of about five parts in twelve of gummy matter, four of resinous matter, and three of earthy, or other indissoluble impurities.[f]

The use of this celebrated medicine, though not known to Hippocrates, can be clearly traced back to Diagoras who was nearly his cotemporary, and its importance has ever since been gradually advanced by succeeding physicians of different nations. Its extensive practical utility however has not been long well understood; and in this country perhaps may be dated from the

[d] *Medical Essays & Obs. vol.* 5. *p.* 116.

[e] Hence the ancients justly deemed the " Meconium multum opio ignavius."

[f] Vide *l. c.*

time of Sydenham. Opium is the chief narcotic now employed; it acts directly upon the nervous power, diminishing the sensibility, irritability, and mobility of the system; and, according to a late ingenious author, in a certain manner suspending the motion of the nervous fluid, to and from the brain, and thereby inducing sleep, one of its principal effects.[g] From this sedative power of opium, by which it allays pain, inordinate action, and restlessness, it naturally follows, that it may be employed with advantage in a great variety of diseases. Indeed, there is scarcely any disorder in which, under some circumstances, its use is not found proper; and though in many cases it fails of producing sleep, yet if taken in a full dose, it occasions a pleasant tranquillity of mind, and a drowsiness, which approaches to sleep, and which always refreshes the patient. Besides the sedative power of opium, it is known to act more or less as a stimulant, exciting the motion of the blood; but this increased action has been ingeniously, and, as we think, rationally ascribed to that general law of the animal œconomy, by which any noxious influence is resisted by a consequent re-action of the system. By a certain conjoined effort of this sedative and stimulant effect, opium has been thought to produce intoxication, a quality for which it is much used in eastern countries.

We shall now proceed to consider the use of opium in particular diseases, beginning with fevers.

In most continued fevers of this climate, though originating from contagion, or certain corruptions of human effluvia, &c. there is, at the beginning, more or less of inflammatory diathesis, and while this continues, opium would generally aggravate the symptoms, and prove dangerous. Its use is likewise forbidden in the more advanced stage of this fever, whenever topical inflammation of the brain is ascertained, which sometimes exists and produces delirium, though other symptoms of the nervous and putrid kind prevail. But when irritation upon the brain is not of the inflam-

[g] See Cullen's *Mat. Med.* C. sedantia. See also what is said of opium.

matory kind, and debility has made much progress, or where delirium is accompanied with spasmodic affections, opium is a sovereign remedy, and may be employed in large doses every eight hours, unless a remission of the symptoms and sleep take place.[h]

In intermittent fevers, opium, in combination with other medicines, was much used by the ancients; but since the introduction of the Peruvian bark, opium is seldom trusted to for the cure of these disorders. This medicine however has been strongly recommended as an effectual means of stopping the recurrence of the febrile paroxysms; and has been given before the fit, in the cold stage, in the hot stage, and during the interval, with the best effects;[i] producing immediate relief, and in a short time curing the patient, without leaving those abdominal obstructions which have been ascribed to the bark. But in these fevers perhaps the best practice is to unite opium with the bark, which enables the stomach to bear the latter in larger doses, and adds considerably to its efficacy.[k]

In inflammatory diseases the use of opium has been much condemned; and Young has established a general rule, "that opium is improper in all those diseases in which bleeding is necessary:"[l] this however has been much disputed;[m] and there are certainly

[h] Vide Cullen *l. c.*

[i] Berryat, who is a strenuous advocate for the use of opium in intermittents, recommends it to be given along with an infusion of centaury an hour before the accession of the paroxysm. See *Memoires presentés à L'Acad. Royal des Scien.* 1755. *T.* 2. *p.* 254.

Lind prefers giving it half an hour after the commencement of the hot fit. Vide *Dis. in hot climates, p.* 316. See also Murray's *Med. Pract. Bib. p.* 321.—On this subject see Brandreth, *Diss. inaug. de febr. interm. Ed.* 1770. Stoerck, *A. Med.* 1. *p.* 57. Tralles, *De Opio Sect.* 2. *p* 70. And others.

[k] Cullen *l. c.* [l] *Treatise on Opium. sect.* 39.

[m] See Remmet *Diss. inaug. de opii usu in morb. inflam. Ed.* 1774. Triller, *Diss. de suspecta opii ope in pluritide, p.* 4. Also Tralles *l. c.* De Haen *Rat. Med. P. i. p.* 24. &c.

numerous exceptions to it, which we shall now recite in the words of Dr. Cullen. " Such are those cases in which the inflammatory " state arises from irritation in a particular part, producing " spasm, and supervening inflammation. Thus in cases of jaundice, " I have found a biliary stone, in passing the biliary ducts, give " such an irritation as to produce a considerable inflammatory " state in the system; and though I have found it necessary, for " moderating this, to employ blood-letting, yet, as I considered " the passage of the stone to be chiefly interrupted by a spasmodic " constriction of the ducts, I have employed opium for taking off " this with great advantage. Similar circumstances have fre- " quently occurred in the case of urinary calculi passing the " ureters, in which I have found it necessary to employ opium " and blood-letting at the same time.

" In like manner as opium is useful in moderating excretions, " so when the irritation occasions an increase of these excretions, " which is attended with affections which irritate the whole " system, opium becomes especially useful. Hence it becomes " so generally useful in catarrhal affections, and the cough at- " tending them; and probably it is this analogy that has brought " the use of opium to be frequently employed in pneumonic in- " flammations. It is possible that there may be cases of such " inflammations wherein the opium may be more useful in taking " off the cough, than hurtful by aggravating the inflammatory " state of the system: but I have hardly met with such cases; and " even in the recent state of catarrhs from cold, I have found the " early use of opium hurtful: and in cases of pneumonic inflam- " mation, I have always found it to be very much so, if exhibited " before the violence of the disease had been moderated by re- " peated blood-letting. When that indeed has been done, I have " found the opium very useful in quieting the cough, and I " have hardly ever found it hurtful by stopping the expectoration. " It may suspend this for some hours; but if the glands of the " bronchia have been duly relaxed by bleeding and blistering,

" the expectoration after the use of opiates always returns with " more advantage than before. The mucus which had issued " before had been poured out from the follicles in an acrid state; " but, by being made to stagnate, it becomes milder, and is dis- " charged in what the ancients called a concocted state, with more " relief to the lungs."[a]

When opium is so managed as to procure sweat, it will tend to remove an inflammatory state of the system, and may prove generally useful; a notable instance of this we observe in the cure of acute rheumatism by means of Dover's powder.

In the small-pox opium, since the time of Sydenham, has been very generally and successfully prescribed, especially after the fifth day of the disease; but during the first stage of the eruptive fever, we are told that it always does harm; an opinion which our experience at the Small-pox Hospital warrants us to contradict: for even at that period of the disorder we often find the pulse languid, and the countenance pale, though pains in the loins and head are at the same time very severe; these symptoms, with restlessness, and other signs of irritability, which appear for some days after the attack of the disease, are considerably relieved by opium; to which however we usually add camphor and vinum antimonii tartarisati, taking care always to keep the body sufficiently open by the frequent use of a proper cathartic.

In hæmorrhagic disorders the use of opium is inferred from its known effects in restraining all the excretions, except that of sweat; but unless the hæmorrhages be of the passive kind, or excited by irritation, unattended with inflammation, opium may produce considerable mischief, and therefore its use in these complaints requires great circumspection.

In dysentery opium, though not to be considered as a remedy, may however be occasionally employed to moderate the violence of the symptoms.

In diarrhœa, especially when the acrimony has been carried off

[a] Cullen *l. c.*

by a continuance of the disease, opium is a certain and efficacious remedy.

In cholera and pyrosis, opium is the remedy chiefly trusted to.

In cholic it is employed with laxatives; and no doubt often prevents ileus and inflammation, by relieving the spasm.° Even in ileus and in incarcerated hernia, it is often found to allay the vomiting, the spasms, the pain, and sometimes to diminish the inflammation, and prevent the gangrene of the strangulated gut.

Opium has been lately recommended for the cure of the venereal disease; and instances are adduced in which this medicine succeeded, where mercury had failed; yet few practitioners, we apprehend, will trust to opium alone in these complaints: it is generally allowed, however, to be an useful auxiliary, and greatly to assist the action of mercury. Its use in preventing and stopping the progress of gangrene is well established.

Opium is successfully used in different species of tetanus, and affords relief to various spasmodic and convulsive symptoms occuring in several diseases, which it would exceed our limits to describe particularly; of these we may mention asthma, epilepsy, dyspepsia, hypochondriasis, rabies canina, chorea sancti viti, mania, &c. &c.

Respecting the external application of opium authors seem not sufficiently agreed. Some alledge that when applied to the skin it allays pain and spasm, procures sleep, and produces all the salutary or dangerous effects which result from its internal use; while others assert that, thus applied, it has little or no effect whatever. But there is no doubt that, when mixed with caustic, it diminishes the pain, which would otherwise ensue, probably by decreasing the sensibility of the part. Injected up the rectum, it has all the effect of opium taken into the stomach, but to answer this purpose double the quantity is to be employed. Applied to the naked nerves of animals, it produces immediate torpor, and loss of power

° See Mead, *Mon. et præcepta medica, p.* 64. Pringle, *Diss. of the Army, p.* 152. Haen *Rat. Med. P.* 3. *p.* 94. *P.* 9. *p.* 137.

in all the muscles with which the nerves communicate. Opium taken into the stomach, in an immoderate dose, proves a narcotic poison, producing vertigo, tremors, convulsions, delirium, stupor, stertor, and finally fatal apoplexy.

The officinal preparations of this drug are opium purificatum, pilulæ ex opio, pulvis opiatus, tinctura opii, and tinctura opii camphorata; it also enters the pulvis sudorificus, balsamum anodynum, electuarium japonicum, pulvis e creta composita, &c.

The requisite dose of opium varies in different persons, and in different states of the same person. A quarter of a grain will in one adult produce effects which ten times the quantity will not do in another; and a dose that might prove fatal in cholera or cholic, would not be perceptible in many cases of tetanus or mania. The lowest fatal dose, to those unaccustomed * to take it, seems to be about four grains; but a dangerous dose is so apt to produce vomiting, that it has seldom time to occasion death. When given in too small a dose, it often produces disturbed sleep, and other disagreeable consequences; and in some cases it seems impossible to be made to agree in any dose or form. Often, on the other hand, from a small dose, sound sleep and alleviation of pain will be produced, while a larger one occasions vertigo and delirium. Some prefer the repetition of small doses; others the giving a full dose at once: its operation is supposed to last about eight hours.

* It is well known, that by the continued use of opium the dose requires to be increased to produce the effect desired; and we are told of one instance in which it was increased to ten drams a day. See *Garcias Ab Horto Arom. vers. Clus.*

Papaver Rhoeas.

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PAPAVER RHŒAS. RED, or CORN POPPY.

SYNONYMA. Papaver erraticum. *Pharm. Lond.* Papaver erraticum majus. *Bauh. Pin.* p. 171. Papaver erraticum Rhœas, sive sylvestre. *Park. Theat. p.* 367. Papaver laciniato folio, capitulo breviore glabro, annuum, Rhœas dictum. *Raii. Synop. p.* 308. Ροιας *Theoph. Diosc.* Papaver foliis semipinnatis hispidis fructu ovato glabro. *Hall. Hist. Stirp. Helv. n.* 1064. P. Rhœas. *Gerard. Emac. p.* 371. *Hudson. Flor. Ang. p.* 230. *Withering. Bot. Arr. p.* 551. *Relhan. Flor. Cantab. p.* 203. *Curtis, Flor. Lond. iii, n.* 36.

Class Polyandria. *Ord.* Monogynia. *Lin. Gen. Plant.* 648.

Ess. Gen. Ch. *Cor.* 4-petala. *Cal.* 2-phyllus. *Caps.* 1-locularis, sub stigmate persistente poris dehiscens.

Sp. Ch. P. caps. glabris globosis, caule piloso multifloro, fol. pinnatifidis incisis.

THE root is annual, simple, fibrous: the stalk is upright, branched, having hairs standing at right angles with the stem, which rises from one to two feet in height: the leaves are pinnated, toothed, hairy on both sides, at the base sheath-like: the peduncles are slender, furnished with hairs like the stem, and each supports a single flower: the calyx consists of two leaves, which are ovate, rough, concave, and deciduous: the corolla is composed of four petals, which are large, spreading, roundish, unequal, of a bright scarlet colour, and marked at the base with a shining black spot: the filaments are numerous, slender, purplish, and furnished with roundish compressed antheræ: the germen is egg-shaped, truncated at the top: there is no style: the stigma is convex, radiated: the radii of a purple colour, and permanent: the capsule

answers the description given of the germen; it is smooth, marked with several longitudinal projecting lines, which are in number equal to the radii of the stigma; at the top it is scolloped: the radii are numerous, minute, and of a purple colour.

This plant is common in corn fields, and flowers in June and July. It may be distinguished from *P. dubium*, to which it bears a general resemblance, by its urn-shaped capsules, and by the hairs upon the peduncles standing in a horizontal direction.

The capsules of this species, like those of *somniferum*, contain a milky juice, of a narcotic quality, but the quantity is very inconsiderable, and has not been applied to any medical purpose; but an extract prepared from them has been successfully employed as a sedative.[a]

The flowers have somewhat of the smell of opium, and a mucilaginous taste, accompanied with a slight degree of bitterness. A syrup of these flowers is directed in the London Pharmacopœia, which has been thought useful as an anodyne and pectoral, and is therefore prescribed in coughs and catarrhal affections; but it seems valued rather for the beauty of its colour, than for its virtues as a medicine.

[a] *Boulduc Hist. de L'Acad. Royal des Scien. de Paris*, 1712. *p.* 52. *Chomel. Pl. usuell. T. i. p.* 125. Fouquet of Montpellier prefers this extract to opium. See Murray, *App. Med. vol. ii. p.* 213.

CHELIDONIUM MAJUS. GREATER, or COMMON CELANDINE.

SYNONYMA. Chelidonium majus. *Pharm. Geoff. iii.* 309. *Dale.* 210. *Alston. i.* 407. *Lewis.* 224. *Edinb. New. Dispens.* 170. *Murray. ii.* 300. *Bergius.* 451. *Ger. Emac.* 1069. *Raii. Hist.* 858. *Synop.* 309. *Hall. Helv. n.* 1059. Chelidonium majus vulgare. *Bauh. Pin.* 144. *Park. Theat.* 616. C. majus. *Huds. Ang.* 228. *Withering. Bot. Arr.* 547. *Flor. Dan. t.* 542.

Chelidonium majus

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Polyandria Monogynia. *Lin. Gen. Plant.* 647.

Gen. Ch. *Cor.* 4-petala. *Cal.* 2-phyllus. *Siliqua* 1-locularis, linearis.

Sp. Ch. C. pedunculis umbellatis.

ROOT perennial, tapering, branched, externally brown, internally yellow. Stalks erect, cylindrical, branched, somewhat hairy, from one to two feet in height. Leaves pinnated. terminal leafit large, and often lobed; pinnæ roundish, with deeply scolloped edges. Flowers yellow, in small umbels, upon long hairy footstalks. Calyx consisting of two ovate, entire, hairy, deciduous leaves. Corolla of four petals, which are circular, large, spreading, narrow at the base. Filaments from twenty to thirty, compressed, tapering, shorter than the corolla. Antheræ double, oblong, flattish. Germen cylindrical, long, bent. Stigma blunt. Pod long, valved, somewhat tapering at each end, containing several oval shining seeds attached to the receptacle, which is placed at the junction of the valves.

It grows in hedges, or rough uncultivated places, flowering in most of the summer months.

" The leaves and roots of Celandine have a faint unpleasant smell, and a bitterish very acrid and very durable taste, which is considerably stronger in the roots than in the leaves. Both water and rectified spirit extract nearly the whole of their pungent matter: the leaves, notwithstanding the yellow juice which issues so plentifully from a slight wound, and in which their activity seems to reside, give to rectified spirit a green tincture: the roots, which yield a copious saffron red juice, tinge the same menstruum of a brownish yellow."

" The pungency of this plant is not of the volatile kind, little or nothing of it rising in distillation with water any more than with spirit: it is nevertheless greatly abated by drying the plant itself, or by inspissating with a gentle heat the spirituous or watery infusions."[a]

[a] *Lewis. l. c.*

This acrid plant has been much recommended in the general character of an aperient and attenuant. In jaundice it was long considered as the most effectual remedy that could be employed, as appears from the writings of Dioscorides, Galen, Forestus, and other authors of more recent date; hence it was a principal ingredient in the *decoctum ad ictericos* in the Edinburgh Pharmacopœia. Nor has its use been confined to hepatic obstructions; in those of the other viscera, as well as in the mesenteric and lymphatic glands, it is said to have been equally efficacious.[b]

It has also been successfully employed as an expectorant; and several writers found it of great efficacy in curing intermittents.[c] It has been administered in various forms and doses. Half a dram, or a dram of the dry root in powder, or an infusion in wine or water of a dram, or a dram and an half, of the fresh root, or three or four drops of its yellow juice in any convenient vehicle, are directed for a dose. We have little doubt but that the virtues of Celandine have been greatly exaggerated, and its general employment in jaundice seems to have originated in the absurd doctrine of signatures: in certain cases however we should expect to find it an useful remedy, for it evidently possesses active powers; and thus it is externally used to destroy warts, clean foul ulcers, and remove opacities of the cornea.

[b] *Lange. De Med. Bruns. p.* 124. [c] See *Murray. l. c.*

Capparis spinosa

Published by T. Cadell, Strand, May 1, 1808

ORD. XXII. PUTAMINEÆ.

(From *Putamen*, a shell)

Certain plants of a similar habit, whose seed-vessel or fruit is commonly covered with a woody shell.

CAPPARIS SPINOSA. COMMON CAPER-BUSH.*

SYNONYMA. Capparis. *Pharm. Geoff. iii.* 250. *Dale.* 324. *Alston. i.* 370. *Bergius.* 449. *Murray. ii.* 305. *Edinb. New Disp.* 160. Καππαρις. *Dioscor.* Capparis spinosa fructu minori, folio rotundo. *Bauh. Pin.* 480. Capparis rotundiore folio. *Ger. Emac.* 895. *Park. Theat.* 1023. *Ray. Hist.* 1629. *Ic. Smith. Specileg. Bot. t.* 20.

Polyandria Monogynia. *Lin. Gen. Plant.* 643.

Gen. Ch. *Cal.* 4-phyllus, coriaceus. *Petala* 4. *Stam.* longa. *Bacca* corticosa, unilocularis, pedunculata.

Sp. Ch. C. pedunculis solitariis unifloris, stipulis spinosis, foliis annuis, capsulis ovalibus.

ROOT woody, crooked. Stem trailing, much branched, round, smooth: branches alternate, spreading, often downy, leafy, many flowered. Leaves alternate, on short footstalks, spreading, oval, or roundish, in the wild plant often terminated by a little sharp point, which disappears by culture, entire, veiny, succulent, bright green, deciduous. Stipulæ none: but in their stead are two spines at the base of the footstalks, acute, somewhat recurved, yellowish, which are nearly obliterated in the cultivated plant. Flowers numerous, axillary, solitary, on footstalks, without bracteæ,

* The only medicinal plant of this order.

large, handsome, inodorous. Flower-stalks round, longer than the leaves. Calyx of four unequal concave leaves, tipped with purple. Petals much larger than the calyx, spreading, obovate, waved, white, with a faint tincture of red. Stamina very numerous, the length of the petals, spreading, slender in the upper part, pale purple like the antheræ. Germen oval, small, green, standing on a round purplish footstalk, which is longer than the stamina. Stigma small, blunt. Capsule oblong, oval, coriaceous.

It is a native of the south of France, Italy, and the Levant.

Dr. Smith, of whose figure and description of the Caper-bush we have here availed ourselves, says, "it is surprising that this beautiful shrub, which is as common in the south of France as the bramble with us, and which grows luxuriantly in the open air, when trained against a wall, even at Paris, should be almost unknown in the English gardens, where it can scarcely be made to flower, except in a stove, with all possible care."[a]

The buds, or unexpanded flowers of this plant, are in common use as a pickle; and for this purpose the smaller or younger buds are most esteemed.

This grateful pickle has the character of an antiscorbutic, and of removing hepatic and other visceral obstructions; but the part of the plant which has been chiefly recommended for medicinal purposes, is the bark of the root. This is of considerable thickness, externally of an ash colour, and transversely wrinkled; on drying it rolls up into quills of about a third of an inch in diameter; its taste is somewhat aromatic, bitterish, and acrid.

By Dioscorides, and other ancient writers, it was thought of great efficacy as a deobstruent, and was generally employed in obstructions of the liver and spleen, menstrual suppressions, and sciatica; in this view it has also been used by Forestus[b] and Sennertus;[c] and on the presumption of its deobstruent power, it is reckoned one of the five less aperient roots: at present, however, its use is wholly laid aside.

[a] *Specil. Bot. t.* 20. [b] *Oper. Lib.* 20. *Obs.* 2. & 3. [c] *Pract. Lib.* 3. *P.* 4. *c.* 2. & 3.

Cochlearia officinalis.

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ORD. XXIII. SILIQUOSÆ.

(From *Siliqua*, a pod)

Plants having a pod for their seed-vessel.

COCHLEARIA OFFICINALIS. COMMON SCURVY-GRASS.

SYNONYMA. Cochlearia hortensis. *Pharm. Lond. & Edin.* Cochlearia. *J. Bauh.* 2. 942. Cochlearia rotundifolia. *Gerard.* 324. Cochlearia folio subrotundo. *Bauh. Pin.* 110. Cochlearia major rotundifolia sive Batavorum. *Park.* 285. Cochlearia. *Raii. Hist. Spec.* 1. p. 822. *Synop.* 302. Nasturtium foliis radicalibus subrotundis, caulinis oblongis, subsinuatis. *Hal. Stirp. Helv.* No. 503. Cochlearia officinalis. *With. Bot. Arrang.* 677. *Flor. Dan.* t. 135.

Class Tetradynamia. *Ord.* Siliculosa. *L. Gen. Plant.* 803.

Ess. Gen. Ch. *Silicula* emarginata, turgida, scabra; volvulis gibbis, obtusis.

Sp. Ch. C. foliis radicalibus cordato-subrotundis; caulinis oblongis subsinuatis. *Caulis ramosus.*

THE root is perennial, fibrous, and usually produces several upright branched angular stems, about a span high; the radical leaves are heart or kidney-shaped, fleshy, succulent, and stand upon long footstalks; the stem-leaves alternate, rhomboidal, blunt, and dentated on each side; towards the top the leaves are

sessile, or embracing the stem, but towards the bottom they are frequently upon short broad footstalks; the flowers are cruciform, and stand upon short peduncles, terminating the branches in thick clusters; the calyx consists of four leafits, which are oval, blunt, concave, gaping, deciduous, and whitish at the margin; the petals are four, white, oval, spreading, and twice the length of the calyx; the filaments are six, four long and two short, greenish, tapering, and crowned with yellow antheræ; it has no style, and the germen becomes a small roundish compressed pod, containing rough seeds. It is found on the mountains of Scotland, Cumberland, and Wales, but more commonly about the Sea shores: it flowers in April and May.

We have figured this plant from a specimen obtained from Mr. Curtis's botanic garden at Brompton, where it differs in no respect from the same plants growing in their native soil, a circumstance which induces many to cultivate Scurvy-grass in gardens for medical use. It has an unpleasant smell, and a warm acrid bitter taste. "Its active matter is extracted by maceration both in watery and in spirituous menstrua, and accompanies the juice obtained by expression. The most considerable part of it is of a very volatile kind; the peculiar penetrating pungency totally exhaling in the exsiccation of the herb, and in the evaporation of the liquors. Its principle virtue resides in an essential oil, separable in a very small quantity, by distillation with water."[a]—Scurvy-grass[b] is antiseptic,[c] attenuant, aperient, and diuretic, and is said to open obstructions of the viscera and remoter glands, without heating or irritating the system; it has been long considered as the most

[a] Lewis M. M. 242. "The oil is so ponderous as to sink in the aqueous fluid, but of great volatility, subtility, and penetration. One drop dissolved in spirit, or received on sugar, communicates to a quart of wine, or other liquors, the smell and taste of Scurvy-grass." Lewis l. c.

[b] This species is now preferred to all the other species of Cochlearia for its medical use.

[c] See the experiments of Sir John Pringle.

effectual of all the antiscorbutic plants,* and its sensible qualities are sufficiently powerful to confirm this opinion. In the rheumatismus vagus, called by Sydenham Rheumatismus scorbuticus, consisting of wandering pains of long continuance, accompanied with fever, this plant, combined with Arum and wood-sorrel, is highly commended both by Sydenham and Lewis.[d]—A remarkably volatile and pungent spirit, prepared from this herb, and known by the name of *Spiritus antiscorbuticus s. mixtura simplex antiscorbutica Drawizii.*‡ *(Pharm. Wert.)* was found by Werlhof[e] to be a useful remedy in paralysis and other diseases requiring an active and powerful stimulant, given in the dose of thirty drops several times a day. But as an antiscorbutic, neither this, nor the conserve promises so much benefit as the fresh plant, eaten as sallad, or the expressed juice, as directed in the Pharmacopœias.

* We have testimony of its great use in scurvy, not only from physicians, but navigators, as Anson, Linschoten, Maartens, Egede, and others. And it has been justly noticed, that this plant grows most plentifully in those high latitudes, where the scurvy is most obnoxious: Forster found it in great abundance in the islands of the South Sea. In Islandia parant incolæ hanc herbam cum lacte acidulato vel ejus sero; condiunt eam etiam sale culinari in magnis doliis, & per hiemem servant. Cum oves in locis, ubi Cochlearia crescit, pascuntur, avide quidem illam edunt & valde pinguescunt, sed caro nauseoso sapore inficitur. Olafsen. *Reise durch Island.* T. 1. p. 257. Vide Berg. M. M. 557.

[d] Opera 278. M. M. 241.

‡ Fit ex spiritu tartari et spiritu cochleariæ, quibus vitriolum ad rubidinem calcinatum irroratur, succedente digestione et distillatione. Murray Ap. Med. vol. 2. p. 347.

[e] Obs. de febr. p. 145. Dr. Cullen observes, that "several foreign dispensatories have ordered it to be treated by distillation with spirit of wine, and have thereby obtained a volatile poignant spirit, that may prove a useful stimulus in several cases. It may probably be improved by a combination with the volatile acid of tartar, as in the spiritus antiscorbuticus *Drawitzii*, and in this state may be a useful stimulant in paralytic cases; it may also be employed as a diuretic, and in this way also be useful in scurvy." M. M. vol. 2. 165.

CARDAMINE PRATENSIS. COMMON LADIES-SMOCK, Or, CUCKOW-FLOWER.

SYNONYMA. Cardamine. *Pharm. Lond. & Edin.* Nasturtium pratense magno flore. *Bauh. Pin.* 104. Nasturtium pratense majus seu Cardamine latifolia. *Park.* 825. Iberis Fuchsii seu Nasturtium pratense sylvestre. *J. B.* 2. 889. Cardamine. *Ger. Raii. Hist. Sp.* 2. p. 814. *Synop.* 299. Cardamine foliis pinnatis radicalibus subrotundis, caulinis linearibus. *Hal.* No. 473. Cardamine pratensis. *With. Bot. Arrang.* 688. *Relhan. Flor. Cant.* 255. *Curt. Flor. Lond.* α Floribus simplicibus. β Floribus plenis. *H. Kew.* Σισυμβριον ἑτερον. *Dioscor.*

Class Tetradynamia. *Ord.* Siliquosa. *L. Gen. Plant.* 812.

Ess. Gen. Ch. *Siliqua* elastice dissiliens valvulis revolutis. *Stigma* integrum. *Cal.* subhians.

Sp. Ch. C. foliis pinnatis: foliolis radicalibus subrotundis; caulinis lanceolatis.

THE root is perennial, branched, and sends off many long round fibres; the stalk is erect, round, smooth, sometimes branched towards the top, and rises about nine inches high: the leaves are pinnated, radical leaves frequently wanting, otherwise spreading in an orbicular shape, with roundish pinnæ, which are dentated, or cut into several irregular unequal angles; the leaves upon the stalk are erect, and consist of four or five pair of pinnæ, which are narrow, spear-shaped, concave, pointed, and the odd or terminal leafits are the largest: the flowers terminate the stem in a cluster or racemus, and stand upon smooth naked peduncles; the calyx is composed of four scaly leaves, which are oblong, obtuse, concave, deciduous, and alternately protuberant at the base; the corolla is

Cardamine pratensis

cruciform, and of a purplish white colour; the petals are obversely veined, somewhat notched at the apex, and yellowish at the base; the filaments are six, four long and two short, invested at the bottom with four nectareous glands; the antheræ are small, oblong, and placed upright upon the summits of the filaments; there is no style; the germen is round, slender, about the length of the stamina, and becomes a long compressed pod of two valves, which, on opening, roll back in a spiral manner, and in the cells are contained many round seeds. It is common in meadows and moist pastures, producing its flowers in April and May.

This plant has the same sensible qualities as water-cress, though in an inferior degree to it, and indeed to most of that class of plants, called by Dr. Cullen siliquosæ, which comprehends both the orders of siliquosa and siliculosa of Linnæus, and the cruciform of Tournefort. It is the flower of the Cardamine which has a place in the Materia Medica of the British Pharmacopœias, upon the authority of Sir George Baker. who, in the year 1767, read a paper at the London College, recommending these flowers as an antispasmodic remedy,[a] which has since been published in the Medical Transactions.[b] In this account Sir George relates five cases[c] wherein the flores cardamines were successfully used; and in a P. S. to the second edition, he says, "Since the first edition of this volume, I have seen several instances of the good effects of flores cardamines in convulsive disorders." In Epilepsy, however,

[a] We find no account of the use of these flowers but by Dale, who says of the plant, "Calida & acris est, & nasturtii pollet viribus. Flos in convulsionibus laudatur ex MSS. D. Tancred Robinson, M. D." Pharmacol, 204.

[b] Medical Transactions, vol. 1. 442.

[c] Viz. two of chorea sancti Viti, one of spasmodic asthma, an hemiplegia accompanied with convulsions on the palsied side, and a case of remarkable spasmodic affections of the lower limbs; the two first were cured in less than a month; the two second were also happily removed: but in the last case the patient had experienced some relief from the flor. card. when she was seized with a fever which proved fatal. See l. c.

this remedy has been generally found unsuccessful. Greeding, who tried it in a great number of cases, and in large doses, experienced but one instance of its good effects.[d] The dose of the powdered flowers is from half a dram to two drams.

[d] Ludwig. Advers. Medico-pract. Vol. 3. P. 3. p. 564.

SISYMBRIUM NASTURTIUM. WATER-CRESSES.

SYNONYMA. Nasturtium aquaticum. *Pharm. Lond. & Edinb.* Nasturtium aquaticum supinum. *Bauh. Pin. p.* 105. Nasturtium aquaticum, sive Cratevæ Sium. *Gerard. Emac. p.* 257. Sisymbrium Cardamine sive N. aquaticum. *J. Bauh. Hist. vol. 2. p.* 884. N. aquaticum vulgare. *Raii Hist.* 816. *Synop. p.* 300. *Park. Theat. p.* 1239. Sisymbrium foliis pinnatis, pinnis subrotundis, brevibus racemis. *Hal. Stirp. Helv. n.* 482. Sisymbrium Nasturtium. *Withering. Bot. Arrang. p.* 690. *Flor. Dan. t.* 690. *Curt. Flor. Lond.* Καρδαμιν s. Σιον *Dioscorid.*

Class Tetradynamia. *Ord.* Siliquosa. *Lin. Gen. Plant.* 813.

Ess. Gen. Ch. *Siliqua* dehiscens valvulis rectiusculis. *Calyx* patens. *Corolla* patens.

Sp. Ch. S. siliquis declinatis, foliis pinnatis: foliolis subcordatis.

THE root is biennial, long, creeping, and beset with several close tufts of long slender fibres: the stalks are thick, branched, and frequently rise above a foot high: the leaves are pinnated, and consist of two or three pair of irregular oblong pinnæ, terminated by an odd one, which is the largest: the flowers are disposed in short terminal spikes, and appear in June and July: the corolla consists of four petals, which at their extremities are roundish, spreading, and of a white colour: the calyx is of four

Tropæolum Nasturtium

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oval leafits, which commonly fall off by the expansion of the flower: the stamina are six, four long and two short, and furnished with simple antheræ: the style is short, with an obtuse stigma, the germen is long, slender, and becomes a crooked pod, which contains small round seeds. It is a native of Britain, and grows commonly in brooks and stagnant waters.

" The leaves of the Water-cresses have a moderately pungent taste, emit a quick penetrating smell, like that of mustard-seed, but much weaker. Their pungent matter is taken up both by watery and spirituous menstrua, and accompanies the aqueous juice, which issues copiously upon expression: it is very volatile so as to arise,[a] in great part, in distillation, with rectified spirit, as well as with water, and almost totally to exhale in drying the leaves, or inspissating by the gentlest heat to the consistence of an extract, either the expressed juice, or the watery or spirituous tinctures. Both the inspissated juice, and the watery extract, discover to the taste a saline impregnation, and in keeping throw up crystalline efflorescences to the surface. On distilling considerable quantities of the herb with water, a small proportion of a subtile volatile very pungent oil is obtained."[b]

Water-cresses obtain a place in the Materia Medica for their antiscorbutic qualities, which have been long very generally acknowledged by physicians. They are also supposed to purify the blood and humours, and to open visceral obstructions;[c] they are nearly allied to scurvy-grass, but are more mild and pleasant, and for this reason are frequently eaten as sallad. In the pharmacopœias the juice of this plant is directed with that of scurvy-grass and Seville oranges; and Dr. Cullen has remarked, that the addition of acids renders the juices of the plantæ siliquosæ more certainly effectual, by determining them more powerfully to an acescent fermentation.[d]

[a] This volatile matter has been erroneously attributed to an alkaline or alkalescent quality of the plant.

[b] Lewis Mat. Med.

[c] Hoffman and Haller thought highly of its powers in this way. [d] Mat. Med.

COCHLEARIA ARMORACIA. HORSE-RADISH.

SYNONYMA. Raphanus rusticanus. *Pharm. Lond. & Edinb. Bauh. Pin.* p. 96. *Gerard. Emac.* p. 241. *Park. Theat.* p. 860. *Raii Hist.* p. 818. *Synop.* p. 301. *Hist. Ox. iii. t.* 7. *f.* 2. Nasturtium foliis radicalibus lanceolatis crenatis, caulinis incisis. *Hal. Stirp. Helv. n.* 504. Cochlearia Armoracia. *Huds. Ang.* p. 284. *Withering Bot. Arr.* p. 681. *Relhan Flor. Cant.* p. 249.

Class Tetradynamia. *Ord.* Siliculosa. *Lin. Gen. Plant.* 803.

Ess. Gen. Ch. *Silicula* emarginata, turgida, scabra: valvulis gibbis, obtusis.

Sp. Ch. C. foliis radicalibus lanceolatis crenatis; caulinis incisis.

THE root is perennial, long, tapering, white: the stalk is round, erect, branched, smooth, and rises two or three feet in height: the radical leaves are very large, lance-shaped, scolloped at the edges, and stand on strong footstalks; those of the stalk are much smaller, narrow, and often divided at the edges: the flowers are white, numerous, and terminate the branches in thick clusters: the calyx is composed of four leaves, which are egg-shaped, concave, opening, and deciduous: the corolla consists of four inversely egg-shaped petals, which expand in opposite directions, and form a cross; they are twice the size of the calyx, and are inserted by narrow claws: the filaments are six, tapering, the two opposite ones shorter than the other four, and all furnished with blunt compressed antheræ: the germen is heart shaped, supporting a simple style, which is short, permanent, and furnished with an obtuse stigma: the capsule is heart-shaped, turgid, slightly notched at the end, and furnished with the style; it is divided into two cells, each containing about four seeds. It is found growing wild in many parts of England, particularly about rubbish and the sides of ditches; but it is commonly cultivated in gardens, and flowers in May.

Cochlearia Armoracia

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The root of this plant, which has long been received into the Materia Medica, is also well known at our tables; "it affects the organs both of taste and smell with a quick penetrating pungency; nevertheless it contains in certain vessels a sweet juice, which sometimes exudes in little drops upon the surface. Its pungent matter is of a very volatile kind, being totally dissipated in drying, and carried off in evaporation or distillation by water and rectified spirit: as the pungency exhales, the sweet matter of the root becomes more sensible, though this also is in a great measure dissipated or destroyed. It impregnates both water and spirit, by infusion or distillation, very richly with its active matter: in distillation with water it yields a small quantity of essential oil, exceedingly penetrating and pungent."[a]

Dr. Cullen having, in our opinion, mentioned every thing necessary to be known respecting the medical virtues of Horse-radish, we shall here transcribe all that the ingenious Professor has written on this subject:

" The root of this only is employed, and it affords one of the " most acrid substances of this order, (siliquosa) and therefore " proves a powerful stimulant, whether externally or internally " employed. Externally it readily inflames the skin, and proves a " rubifacient that may be employed with advantage in palsy and " rheumatism; and if its application be long continued it pro- " duces blisters."—" Taken internally, I have said in what manner " its stimulant power in the fauces may be managed for the cure " of hoarseness.[b] Received into the stomach, it stimulates this, " and promotes digestion, and therefore is properly employed as a " condiment with our animal food. If it be infused in water, and

[a] *Lewis, M. M. p. 534.*

[b] The Doctor here refers to the article Erysimum, the juice of which mixed with an equal part of honey or sugar, is strongly recommended for the cure of hoarseness which proceeds from an interrupted secretion of mucus, and which stimulants of the acrid kind are found most efficacious in restoring. When the Erysimum was not at hand, the Dr. substituted a syrup of Horse-radish. He says, " I have found

" a portion of this infusion be taken with a large draught of warm
" water, it readily proves emetic, and may either be employed by
" itself to excite vomiting, or to assist the operation of other
" emetics. Infused in water, and taken into the stomach, it proves
" stimulant to the nervous system, and is thereby useful in palsy;
" and if employed in large quantity it proves heating to the whole
" body: and hereby it proves often useful in chronic rheumatism,
" whether arising from scurvy, or other causes. Burgius[c] has
" given us a particular method of exhibiting this root, which is
" by cutting it down, without bruising, into very small pieces;
" and these, if swallowed without chewing, may be taken down
" in large quantity, to that of a table spoonful: and the author
" alleges, that in this way, taken every morning for a month
" together, this root has been extremely useful in arthritic cases;
" which however I suppose to have been of the rheumatic kind.
" It would seem that in this manner employed, analagous to the
" use of unbruised mustard-seed, it gives out in the stomach its
" subtle volatile parts, that stimulate considerably without in-
" flaming. The matter of Horse-radish, like the same matter of
" the other siliquose plants, carried into the blood vessels, passes
" readily into the kidneys, and proves a powerful diuretic, and is
" therefore useful in dropsy; and we need not say, that in this
" manner, by promoting both urine and perspiration, it has been
" long known as one of the most powerful antiscorbutics."[d]

that one dram of the root, fresh, scraped down, was enough for four ounces of water, to be infused in a close vessel for two hours, and made into a syrup, with double its weight of sugar. A tea-spoonful or two of this syrup, swallowed leisurely, or at least repeated two or three times, we have found often very sudden ly effectual in relieving hoarseness." *Mat. Med. v. ii. p.* 167.

[c] See *Berg. Mat. Med. p.* 559. where he adds, " Agit secure, ventriculum vix calefacit, nisi sub fine curæ. Multos scorbuticos hoc etiam regimine perquam levatos vidi."

[d] *Mat. Med. vol. ii. p.* 169.

We are told by Dr. Withering, that an infusion of Horse-radish in milk makes one of the safest and best cosmetics. *l. c.*

Sinapis nigra

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SINAPIS NIGRA. COMMON BLACK MUSTARD.

SYNONYMA. Sinapi. *Pharm. Lond. & Edinb.* Sinapi rapi folio. *Bauh. Pin. p.* 99. Sinapi sativum alterum. *Gerard. Emac. p.* 244. Sinapi sativum rapi folio. *Park. Theat. p.* 831. Sinapi sativum secundum. *Raii Hist. p.* 803. *Synop. p.* 295. Sinapi siliquis tetragonis glabris. *Hall. Stirp. Helv. n.* 465. Sinapis nigra. *Huds. Flor. Ang. p.* 297. *Lightf. Flor. Scot. p.* 361. *Withering Bot. Arrang. p.* 713.

Class Tetradynamia. *Ord.* Siliquosa. *Lin. Gen. Plant.* 821.

Ess. Gen. Ch. Cal. patens. *Cor.* ungues recti. *Glandula* inter stamina breviora et pistillum, interque longiora et calycem.

Sp. Ch. S. siliquis glabris racemo appressis.

THE root is annual: the stem erect, smooth towards the top, channelled at the bottom, about three feet in height, divided and subdivided in numerous distant spreading branches: the leaves are variously shaped: those near the root are large, irregularly heart-shaped, and pinnatifid or lobed at the base; those on the upper branches are narrow, and more entire: the flowers are yellow, and terminate the branches in close spikes: the calyx consists of four expanding strap-shaped deciduous leaves: the corolla is composed of four petals, which at their extremities are roundish, flat, spreading, and stand in opposite directions upon upright narrow claws: the filaments are six, four long and two short; they are all erect, tapering, and furnished with simple antheræ: the germen is cylindrical, terminated by a style, which is crowned with a knobbed stigma: a small gland is placed between each of the short filaments and the germen, and between each pair of the long filaments and the calyx, the seed vessels or pods stand nearly parallel with the

branches, and are long, smooth, protuberant at the base, two-celled, two-valved, and contain many globular shining dark seeds. It is common in corn fields, and banks of ditches; but it is cultivated for use, and flowers in June.

The seeds of this species of Mustard, which are directed by the London College, and those of the S. alba, which are preferred by that of Edinburgh, manifest no remarkable difference to the taste, nor in their general effects, and therefore answer equally well for the uses of the table, and for the purposes of medicine. They have an acrid pungent taste, and when bruised this pungency shews its volatility by powerfully affecting the organs of smell; they readily impart these qualities to aqueous liquors, and by distillation with water yield an essential oil of great acrimony. To rectified spirit these seeds give out very little either of their smell or taste. Subjected to the press, they yield a considerable quantity of mild insipid oil, which is as free from acrimony as that of almonds.

By writers on the Materia Medica, Mustard is considered to promote appetite, assist digestion, attenuate viscid juices, and by stimulating the fibres, to prove a general remedy in paralytic and rheumatic affections. Joined to its stimulant qualities, it frequently, if taken in considerable quantity, opens the body,[a] and increases the urinary discharge, and hence has been found useful in dropsical complaints.[b] In its medicinal character it is nearly allied to the last mentioned plant, and, like all the other Siliquosæ, has been recommended as an antiscorbutic;[c] though we are told

[a] As much of the unbruised seeds as an ordinary table-spoon will contain does not prove heating to the stomach, but stimulates the intestinal canal, and commonly proves laxative. Cullen, *M. M. vol. ii. p.* 171.

[b] See Mead and others.

[c] "Semen Sinapeos in mortario tritum & cum vino albo mixtum, multas centurias Scorbuticorum & languentium hominum in obsidione Rupellensi sanitati restituit. Plerique enim obsessorum & urbe inclusorum fame & inedia pressi, multa sordida & quæ natura abhorret esitare coacti, respirandi difficultatem, gingivarum putredi-

by Haller, that the use of Mustard disposes the humours to putrescency;[d] an opinion which he was probably led to entertain from a supposition that it contained volatile alkali: for it is well known that some of these pungent plants, when in a state of putrefaction, give out this alkali by distillation, and hence have been termed alkalescent plants; but the fermentation of these vegetable substances may be so directed as to be of the acescent kind,[e] and the alkali obtained from them seems not to have existed in the vegetable in a separate state.† The great pungency of these plants is not therefore to be ascribed to the volatile alkali, but to the essential oil which they contain. Bergius informs us, that he found Mustard of great efficacy in curing vernal intermittents; for this purpose he directed a spoonful of the whole seeds to be taken three or four times a day, during the apyrexia; and when the disease was obstinate, he added flower of Mustard to the bark.[f] Externally these seeds are frequently used as a stimulant or sinapism.[g] Mustard seed may be most conveniently given entire or unbruised, and to the quantity of a spoonful or half an ounce for a dose.

nem, dentium nigritiem & vacillationem, aliaque Scorbuti symptomata contraxerant, unde multi moriebantur, donec tandem Sinapi in fossis circa urbem copiosè inventum, & quo dictum est modo adhibitum omnes liberavit." Vide *Raii Hist. p.* 803.

[d] "Ut denique dicam quæ sentio, & ipse vidi, frequentem Sinapi usum credo humores ad naturam putredinosam disponere, morbos que acutos redere perniciosiores, si in mustardæ amantes hominens inciderint. Neque ventriculo mustardam prodesse putem, quæ vix ipsa coquatur, & plusculis horis ructus putridos cieat." *Hist. Stirp. Helv. n.* 465.

[e] *Cullen, l. c.* [f] *Mat. Med. vol. ii. p.* 581.

[g] "The fresh powder of Mustard shews little pungency and much bitterness; but when it has been moistened with vinegar, and kept for a day, the essential oil is evolved, and it becomes considerably more acrid, as is well known to those who prepare Mustard for the table; a circumstance which should be attended to when designed for external use." *Cullen, l. c.*

† We have good reason to suppose, that Boerhaave was mistaken in asserting, "Semen optimum Sinapis, solum contritum affuso acerrimo aceto effervescere memini," Chem. vol. ii. p. 142. as it has since been denied by the most respectable authorities.

ERYSIMUM OFFICINALE. HEDGE MUSTARD.

SYNONYMA. Erysimum. *Pharm. Geoff. iii.* 444. *Dale.* 203. *Alston. ii.* 135. *Lewis.* 289. *Cullen. ii.* 166. *Edinb. New Disp.* 186. *Murray. ii.* 315. *Bergius.* 561. *Hall.* 478. Erysimum vulgare. *Bauh. Pin.* 100. Erysimum Dioscorides Lobelii. *Ger. Emac.* 254. Irio sive Erysimum vulgare. *Park. Theat.* 833. Eruca siliqua cauli appressa, Erysimum dicta. *Ray. Hist.* 810. *Synop.* 298. Erysimum officinale. *Hudson. Ang.* 286. *Wither. Bot. Arr.* 695. *Ic. Flor. Dan.* 560. *Curt. Flor. Lond.*

Tetradynamia Siliquosa. *Lin. Gen. Plant.* 814.

Gen. Ch. *Siliqua* columnaris, exactè tetraëdra. *Cal.* clausus.

Sp. Ch. E. siliquis spicæ adpressis, foliis runcinatis.

ROOT annual, tapering, furnished with long fibres. Stalk from one to two feet in height, erect, round, branched, hairy. Leaves on footstalks, rough, downy, pinnatifid segments, opposite, ovate, toothed, terminal one the largest. Flowers yellow, small, placed in long racemi or spikes. Calyx of four leafits, which are ovate, narrow, blunt, hairy. Corolla composed of four petals, placed oppositely, inversely ovate, standing upon long claws. Filaments six, tapering, two of which are shorter than the others, and having at the base two nectarious glands. Antheræ heart-shaped. Germen cylindrical, striated. Stigma roundish, compressed, notched. Pods nearly conical, obscurely quadrangular, hairy, pressed to the stalk. Seeds of a dingy yellow colour, obliquely truncated at each end.

It is common on dry banks and waste places, and flowers from June till September.

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Erysimum . Alliaria

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The taste of this herb is somewhat acrid, especially the tops of the flower spikes. Its seeds are considerably pungent, and appear to be nearly of the same quality with those of mustard, but weaker.

The Erysimum is said to be attenuant, expectorant, and diuretic, and has been strongly recommended in chronical coughs and hoarseness. Rondeletius informs us, that the last mentioned complaint, occasioned by loud speaking, was cured by this plant in three days. Other testimonies of its good effects in this disorder are recorded by writers on the Materia Medica, of whom we may mention Dr. Cullen, who, for this purpose recommends the juice of the Erysimum to be mixed with an equal quantity of honey or sugar. In this way also it is said to be a useful remedy in ulcerations of the mouth and throat.

In most cases of disease, perhaps the seeds of Erysimum, as more pungent, should be preferred to its leaves.

ERYSIMUM ALLIARIA. SAUCE-ALONE, Or, STINKING HEDGE-MUSTARD.

SYNONYMA. Alliaria. *Pharm. Geoff. iii.* 58. *Dale.* 200. *Alston. ii.* 79. *Lewis.* 31. *Edinb. New Dispens.* 120. *Murray. ii.* 317. *Bergius.* 564. *Bauh. Pin.* 110. *Gerard. Emac.* 794. *Park. Theat.* 112. *Ray. Hist.* 792. *Synop.* 293. *Hall. Hist. Stirp. Helv.* 480. Erysimum Alliaria. *Huds. Ang.* 268. *With. Bot. Arr.* 696. *Ic. Curt. Flor. Lond.* 144.

Tetradynamia Siliquosa. *Lin. Gen. Plant.* 814.

Gen. Ch. Siliqua columnaris, exactè tetraëdra. *Cal.* clausus.

Sp. Ch. E. foliis cordatis.

ROOT biennial, whitish, tapering, fibrous. Stalk erect, two or three feet in height, round, smooth, channelled, sparingly branched. Leaves alternate, heart-shaped, on footstalks, unequally toothed, veiny; on the upper part of the stalk they are pointed, and narrower; at the root kidney-shaped, and standing on long footstalks. Flowers white, in terminal spikes. Calyx of four leafits, which are ovate, concave, of a pale green. Corolla consists of four petals, which are inversely ovate, and placed in opposite directions upon erect claws. Filaments six, tapering, four of which are long and erect, two short and bent inwards. Antheræ yellow, oblong, incumbent. Germen long, quadrangular. Style very short. Stigma roundish. Pod two inches long, obscurely quadrangular, marked with a prominent line between each angle; the cavity divided into two cells, containing oblong shining brown seeds, which appear obliquely truncated at each end.

It is common on hedge banks, and flowers in May and June.

The leaves of this plant have a moderate acrimony, and a strong flavour, resembling that of garlic or onions; they give the same kind of taint to the breath as those roots, and have been used for the same culinary purposes: hence the name Alliaria. On drying, however, their sensible qualities are considerably diminished, or entirely lost.

" The juice, expressed from the fresh leaves, is strongly impregnated with their active matter, but loses the greatest part of it on being inspissated to an extract with the gentlest warmth: in its liquid state, duly secured from the air, it may be kept uninjured for many months. On distilling the fresh herb with water, there arises a small portion of essential oil, which tastes and smells exceeding strongly."[a]

The medicinal character of Alliaria is that of a powerful diaphoretic, diuretic, and antiscorbutic; and as partaking of the qualities of garlick it has been deemed useful as an expectorant and deobstruent, in humoral asthmas, and other cases of dyspnœa. It has

[a] *Lewis. l. c.*

also been much esteemed as an external application, to promote suppuration; and Boerhaave informs us, that he cured a gangrene of the leg, arising from a neglected fracture and contusion, by applying the bruised leaves of Alliaria with wine.[b]

It has been thought unavailing to publish figures of the remaining medical plants of this order, not only because they appear unimportant, but because they are nearly allied to each other both in their medicinal and botanical characters, and are sufficiently exemplified in this work.—See Cochlearia, Sinapi, Cardamine, Raphanus rusticanus, Nasturtium aquaticum.

[b] *Hist. Plant. Lugd. Bat.* 437.

Those omitted are

LIN. NAME.	OFFICINAL.	ENGLISH.
Sisymbrium Sophia	Sophia chrurgorum	Flix-weed
Erysimum Barbaræa	Barbaræa	Winter Hedge-mustard
Raphanus sativus	Raphanus	Garden-Radish
Brassica oleracea	Brassica	Cabbage
.....Rapa	Rapa	Turnep
.....Napus	Nepus	Rape, or Wild-Cabbage
.....Eruca	Eruca	Garden-Rocket
Cheiranthus Cheiri	Cheiri	Wall-Flower
Lepidium sativum	Nasturtium hortense	Garden-Cress
Thlaspi arvense	Thlaspi	Bastard-Cress
.....Bursa pastoris	Bursa pastoras	Shepherd's-Purse

ORD. XXIV. PAPILIONACEÆ.

(From *Papilio*, a Butterfly)

Plants whose flowers somewhat resemble a Butterfly. This Order includes all the leguminous plants.

ASTRAGALUS TRAGACANTHA. GOAT's THORN MILK VETCH.

Ex hac planta exudat Gummi Tragacantha. *Pharm. Lond. & Edinb.*

SYNONYMA. Astragalus aculeatus fruticosus Massiliensis. *Pluk. Alm. p.* 60. Tragacantha. *Bauh. Pin. p.* 388. Tragacantha, sive spina hirci. *Gerard. Emac. p.* 1328. Tragacantha vera. *Park. Theat. p.* 995. Tragacantha Massiliensis. *J. Bauh. Hist. i. p.* 407. *Raii Hist. p.* 933. *Du Hamel, Traité des Arbres, t. ii. p.* 343. *Tournefort, Voyage du Levant, t. i. p.* 21.

Class Diadelphia. *Ord.* Decandria. *Lin. Gen. Plant.* 892.

Ess. Gen. Ch. *Legumen* biloculare, gibbum.

Sp. Ch. A. caudice arborescente, petiolis spinescentibus.

THE root is perennial, long, tapering, and fibrous: the stems are shrubby, short, thick, branched, procumbent, clothed with brown rigid fibres, and beset with long sharp spines: the leaves are pinnated, consisting of about eight pairs of small oblong pinnulæ, or leafits, which are attached to a strong spinous persistent

Astragalus Tragacantha

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footstalk, or midrib: the flowers are large, of a pale yellow colour, and terminate the branches in close clusters: the calyx is tubular, and divided at the rim into five sharp teeth: the corolla is of the papilionaceous kind, consisting of a *vexillum* or upper petal, which is longer than the others, straight, blunt, reflected at the sides, and notched at the end; two *alæ* or lateral petals, which are of an oblong form, and a *carina* or keel-shaped under-petal: the filaments are ten, nine of which are united, and one separate: the antheræ are small and round: the germen is long and roundish: the style tapering, and furnished with a blunt stigma: the seeds are kidney-shaped, and contained in a two-celled pod. It flowers from May till July.

This plant was cultivated in England in the time of Parkinson, (1640): it is a native of Asiatic Turkey, and the Southern parts of Europe, particularly of Italy, Sicily, and Crete. Tournefort discovered it growing plentifully about Mount Ida,[a] where he examined the plant in the month of July, when both the bark and wood were found distended with gum Tragacanth, which by the intensity of the sun's heat forces its way through the bark, and concretes into irregular lumps, or long vermicular pièces, bent into a variety of shapes, and larger or smaller in proportion to its quantity, and the size of the wounds from whence it issues. This gum is imported here chiefly from Turkey: it varies in its colour; but that most esteemed it white, semitransparent, dry, yet somewhat soft to the touch.

M. de la Billardière's late account[b] of the production of this gum differs in some respects from that of Tournefort's. He says, that he visited Mount Lebanon in August, 1786, the season when the gum Tragacanth is collected: he then found the species of Astragalus which afforded it, to be different from that figured and

[a] *Voyage, T. i. p.* 21.

[b] See Description d'une nouvelle espece d'astragale, qui produit au Liban la gomme adragant, *Hist. de l'Acad. R. des Scien. du* 16 *Dec.* 1788. *et Rozier, Obs. sur la physique, pour Janvier,* 1790.

described by Tournefort, and consequently not the Tragacantha of Linnæus.[c] He also contradicts the opinion of Tournefort, who attributes the flowing of the gum to the contraction of the fibres of the bark, occasioned by the intensity of the solar heat; observing that it is only during the night, or when the sun is obscured by clouds, that the gum issues from the plant, and that the same has been remarked at Crete.

" Gum Tragacanth differs from all other known gums, in giving a thick consistence to a much larger quantity of water;* and in being much more difficultly dissoluble, or rather dissolving only imperfectly.[d] Put into water, it slowly imbibes a great quantity of the liquid, swells into a large volume, and forms a soft but not fluid mucilage: if more water be added, a fluid solution may be obtained by agitation, but the liquor looks turbid and wheyish; and on standing the mucilage subsides, the limpid water on the surface retaining little of the gum:"† nor does the mixture of gum arabic promote their union.

The demulcent qualities of this gum are to be considered as similar to those of gum arabic:[e] it is seldom given alone, but frequently in combination with more powerful medicines, especially in the form of troches, for which it is peculiarly well adapted. It gives name to an officinal powder, and is an ingredient in the compound powder of ceruss.

[c] He makes the following distinctions: The stem of the Cretan Astragalus is blackish, that of Lebanon is yellow; the leaves of the first are downy, of the second they are smooth. The flowers of one are red, those of the other are of a pale yellow. From hence he infers that there are various species of Astragalus which produce gum tragacanth.

* Multo fortius est hoc gummi, quam G. arabicum, sc. ut 1 ad 24. Etenim dum G. Tragac. scrup. 8 aquæ puræ libr. 2 in consistentiam Syrupi redigunt, requiruntur G. Arab. unc. 8 ad eundem effectum præstandum. *Berg. M. M. p.* 622.

[d] Rutty asserts, that in five or six hours it will dissolve in cold water. *Observ. on the Lond. & Edinb. Dispen. p.* 179. † *Lewis's M. M.*

[e] See p. 189. Bergius says, *Virtus:* demulcens, obtundens, incrassans. *Usus:* Dysenteria, Diarrhœa, Stranguria. *l. c. p.* 621.

Spartium scoparium

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SPARTIUM SCOPARIUM. COMMON BROOM.

SYNONYMA. Genista. *Pharm. Lond. & Edinb. Gerard. Emac. p.* 1311. Genista angulosa & scoparia. *Bauh. Pin. p.* 395. Genista vulgaris & scoparia. *Park. Theat. p.* 228. Genista angulosa trifolia. *J. Bauh. Hist. vol. i. p.* 388. *Ray Hist. p.* 1723. *Synop. p.* 474. Spartium foliis inferioribus ternatis hirsutis superioribus simplicibus. *Hall. Stirp. Helv. n.* 354. Spartium scoparium. *Hudson. Flor. Ang. p.* 310. *Withering. Bot. Arrang. p.* 756. *Flor. Dan. p.* 313.

Class Diadelphia. *Ord.* Decandria. *Lin. Gen. Plant.* 858.

Ess. Gen. Ch. *Stigma* longitudinale, supra villosum. *Filamenta* germini adhærentia. *Cal.* deorsum productus.

Sp. Ch. S. foliis ternatis solitariisque, ramis inermibus angulatis.

THE root is woody, tough, and extends to a considerable length: the stalk is shrubby, branched, and covered with light brown bark: it usually rises from four to six feet in height, and sends forth a great number of slender angular green shoots: the leaves are small, downy, divided into three oval leafits, and standing upon footstalks of different lengths: the flowers are large, numerous, of the papilionaceous shape, and of a bright yellow colour: the calyx is tubular, divided transversely at the margin into two lips, of these the uppermost is entire, the undermost slightly notched: the corolla is composed of five petals: the superior, or standard petal, is inversely heart-shaped, and bent backwards: the two lateral petals, or wings, are oblong, convex, less than the standard, and united to the filaments: the keel is composed of the two undermost petals, which are connected together by soft hairs at the margin, so as to appear keel-shaped: the filaments are ten, nine of which are united

at the base, of unequal length, curled inwards, and furnished with oblong antheræ: the germen is flat, oblong, hairy, and supports a slender style, with an oblong stigma: the seeds are round, or somewhat kidney-shaped, and contained in a long cylindrical pod, like that of the garden pea. It is common in dry sandy pastures, and flowers in April and May.

Linnæus, Bergius,[a] and several other writers, seem to have confounded the medicinal qualities of this plant with those of Genista tinctoria: the officinal Genista is however by the British Pharmacopœias considered to be the common Broom, of which the tops and seeds are directed for use. The tops and leaves of Broom have a nauseous bitter taste, which they impart by infusion both to water and spirit. They are commended for their purgative and diuretic qualities, and have therefore been successfully employed in hydropic cases, of which particular instances are related by Mead[b] and others, to which we may add the following from Dr. Cullen: "Genista, though very little in use, I have inserted in my catalogue (of cathartics) from my own experience of it. I found it first in use among our common people; but I have since prescribed it to some of my patients in the manner following: I order half an ounce of fresh Broom tops to be boiled in a pound of water till one half of this is consumed, and of this decoction I give two table-spoonfuls every hour till it operates by stool, or till the whole is taken. It seldom fails to operate both by stool and urine, and by repeating this exhibition every day, or every second day, some dropsies have been cured."[c] The ashes of Broom have also been much used in dropsies, and principally on the authority of

[a] They both say of G. tinctoria, "*Virtus:* pellens, purgans, *Usus:* Hydrops;" while the common broom is passed unnoticed. See *M. M. Lin. p.* 170. *Berg. p.* 598.

[b] *Mon. & Præc. p.* 138. where we are told that a patient by taking half a pint of a decoction of green Broom tops, with a spoonful of whole mustard seed, every morning and evening, was cured, after being tapped three times, and trying the usual remedies given in dropsies. See also *Möhring Act. N. C. vol. v. p.* 32.

[c] *Mat. Med. vol. ii. p.* 534.

Sydenham,[d] whose account of their good effects has been since confirmed by the testimony of Dr. Monro,[e] and other writers.[f] We may observe however that the efficacy of this medicine must depend entirely upon the alkaline salt, and not in the least upon the vegetable from which it is obtained. The seeds and flowers of Broom are said to be emetic and cathartic; but the evidence upon which this assertion rests is not wholly to be relied upon, as the former when roasted have been used as a substitute for coffee, and the latter employed as a pickle.[g]

[d] *Opera, p.* 497.

[e] He gave a dram divided into three doses every day. *On Dropsy, p.* 64.

[f] See Odhelius in *Vet. Acad. Handl.* 1762. *p.* 82.

[g] Purgat genistæ semen non minùs potenter fere quàm Spartium aut Helleborus, &c. Idem confirmat Lobelius, semine Genistæ scopariæ vomitum non secus ac Spartio Diosc. sæpius ℥ii decocto propinato citra magnam contentionem se movisse scribens. Verùm flores recèns decerptos sæpissimè quamplurimos & per se acetariis inditos vorat, (inquit) plebecula Arverna & Aquitaniæ maxima copiâ innocuos non modò sed etiam admodum gustui suaves; nec quicquam vomitionis nauseæve, aut commotionis movere solent. Quin apud Brabantos, & Anglos non minùs, gemmantes dum adhuc virides sunt condiuntur sale & aceto flores, menisque inferuntur, Capparum Olearumve pari commendatione. *Ray l. c.* Ray also informs us, that from the MS. of Dr. Hulse, he learned that the flor. genist. given in the form of electuary, with honey of roses, were found of great efficacy in scrophulous affections.

GEOFFROYA INERMIS. SMOOTH GEOFFROYA, Or, BASTARD CABBAGE-TREE.

SYNONYMA. Geoffræa. *Pharm. Edinb.* Geoffræa jamaicencis inermis. *Wright's Description and Use of the Cabbage-bark Tree of Jamaica. Phil. Trans. vol.* 67. *p.* 507. Geoffroya inermis, foliolis lanceolatis. *Swartz. Prodr.* 106.

Class Diadelphia. *Ord.* Decandria. *Lin. Gen. Plant.* 876.

Ess. Gen. Ch. Cal. 5-fidus. *Drupa* ovata. *Nucleus* compressus.

Sp. Ch. G. inermis, foliolis lanceolatis. *Swartz. l. c.*

THIS tree rises to a considerable height, and towards the top sends off several branches: the wood is hard enough to admit of being polished: the external bark is smooth and grey, internally it is black and furrowed: the leaves are pinnated, consisting of several pairs of pinnæ, which are lance-shaped, pointed, veined, smooth, standing in pairs upon short footstalks, but with an odd one at the end: the flowers appear in clusters upon large branched spikes: the calyx is bell-shaped, and divided into five short obtuse segments: the corolla is of the papilionaceous kind, of a pale rose colour, consisting of a *vexillum,* which is roundish, concave, and notched at the apex; two *alæ,* which are oblong, obtuse, concave, and somewhat shorter than the vexillum, and an obtuse divided *carina:* the filaments are ten, nine of which are united at the base: the antheræ are simple, and roundish: the germen is oval, and furnished with a tapering curved style, which is terminated by a hooked stigma: the fruit is pulpy, resembling a small plum, and containing a hard nut or seed, separated into two valves, and marked on each side with a longitudinal furrow.

Geoffroya inermis.

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This tree is a native of Jamaica, where it is distinguished by the name of Cabbage-bark tree, or Worm-bark tree: the bark, which has a mucilaginous and sweetish taste, and a disagreeable smell, was first noticed as a vermifuge by Mr. Peter Duguid.[a] Since that time several accounts of its anthelmintic virtues have been given in the Medical Commentaries by different authors: but Dr. Wright, who resided a long time at Jamaica, has communicated the fullest information concerning this tree, both in respect to its medical and botanical characters. Linnæus enumerates only one species of this genus, which is called after Geoffroy, viz. G. spinosa; and, in contradistinction to this, Dr. Wright, on discovering that the plant here figured belonged to the same family, and was destitute of spines, very properly gave it the trivial name of *inermis*, and it has since been recognized and confirmed in this name upon the authorities of Swartz and Aiton, though, it is not yet admitted into any of the editions of the Systema Vegetabilium of Linnæus. This species was first introduced into this country by Messrs. Kennedy and Lee, who cultivated it at Hammersmith about the year 1778. According to Dr. Wright, the bark of this tree is powerfully medicinal, and its anthelmintic effects have been established at Jamaica by long experience.

It may be given in different forms, as in decoction, syrup, powder, and extract; and the manner of preparing and exhibiting these are thus stated by Dr. Wright:

" The decoction. Take fresh-dried or well-preserved cabbage-bark, one ounce. Boil it in a quart of water, over a slow fire, till the water is of an amber colour, or rather of deep coloured

[a] This author thinks that the inhabitants of Jamaica are more subject to worms, " on account of their *sweet viscid bread-kind*, to wit, plaintains, yams, bananos, sweetish potatoes, &c." and considers it particularly fortunate, that the island supplies them with this bark, which " appears to be the most powerful vermifuge yet known, for it frequently brings away as many worms by stool as would fill a large hat." See *Essays and Observations Physical and Literary, vol. ii. p.* 264.

Madeira wine; strain it off, sweeten it with sugar, and let it be used immediately, as it does not keep many days.

" Syrup of Cabbage-bark. To any quantity of the above decoction add a double portion of sugar, and make a syrup. This will retain its virtues for years.

" The extract of Cabbage-bark is made by evaporating the strong decoction in *balneo mariæ* to the proper consistence; it must be continually stirred, as otherwise the resinous part rises to the top, and on this probably its efficacy depends.

" The powder of well-dried bark is easily made, and looks like jallap, though not of equal specific gravity.

" This bark, like most other powerful anthelmintics, has a narcotic effect; and on this account it is always proper to begin with small doses, which may be gradually increased till a nausea is excited, when the dose for that patient is ascertained. But by frequent use we can in common determine the dose, though we chuse to err rather on the safe side.

" A strong healthy grown person may, at first, take four table spoonfuls of the decoction or syrup, three grains of the extract, or thirty grains of the powder for a dose.

" A youth, three table spoonfuls of the decoction or syrup, two grains of extract, or twenty grains of powder.

" A person of ten years of age, two table spoonfuls of the decoction or syrup, one grain and a half of extract, or fifteen grains of the powder.

" Children of two or three years old, a table spoonful of the decoction or syrup, one grain of extract, or ten grains of the powder. Children of a year old, half the quantity.

" These may be increased, as above observed, till a nausea is excited, which will depend on the strength, sex, and habit of body of the patient.

" Care must be taken that cold water be not drank during the operation of this medicine, as it is in this case apt to occasion

sickness, vomiting, fever, and delirium. When this happens, or when an over large dose has been given, the stomach must be washed with warm water: the patient must speedily be purged with Castor-oil, and use plenty of lime-juice beverage for common drink; vegetable acid being a powerful antidote in this case, as well as in an over dose of opium.

" The decoction is what is mostly given here, and seldom fails to perform every thing that can be expected from an anthelmintic medicine, by destroying worms in the intestines, and bringing them away in great quantities. By frequent use, however, these animals become familiarized, and we find it necessary to intermit it, or have recourse to others of inferior merit.

" The writers of the Edinburgh Medical Commentaries take notice, that the decoction of cabbage-bark always excites vomiting. We find no such effect from it here, and may account for it by their receiving it in a mouldy state. A syrup, therefore, is given there with better effect. They observe also that it has a diuretic virtue, which we have not taken notice of here.

" This bark purges pretty briskly, especially in powder, thirty or forty grains working as well as jallap by stool; but in this way it does not seem to kill worms so well as in decoction.

" Five grains of the extract made a strong man sick, and purged him several times; but, by frequent use, he took ten grains to produce at length the same effect.

" It must not be concealed that fatal accidents have happened from the imprudent administration of this bark, chiefly from over-dosing the medicine. But this cannot detract from the merit of the cabbage-bark, since the best medicines, when abused, become deleterious; and even our best aliments, in too great quantity, prove destructive. Upon the whole, the cabbage-bark is a most valuable remedy, and I hope will become an addition to the *Materia Medica.*"

GLYCYRRHIZA GLABRA. COMMON LIQUORICE.

SYNONYMA. Glycyrrhiza. *Pharm. Lond. & Edinb.* Glycyrrhiza vulgaris. *Gerard. Emac. p.* 1302. *Raii. Hist. p.* 910. *Synop. p.* 324. Glycyrrhiza siliquosa vulgaris. *Park. Theat. p.* 1098. Glycyrrhiza radice repente, &c. *J. Bauh. Hist. ii. p.* 328. Glycyrrhiza siliquosa vel germanica. *Bauh Pin. p.* 352. *Hist. Oxon. v. ii. p.* 89. Conf. Pallas. *Reise durchs Russ. Reich. T. i. p.* 498. *n.* 120. γλυκυρριζα et γλυκυρριξα *Græcorum.*

Class Diadelphia. *Ord.* Decandria. *Lin. Gen. Plant.* 882.

Ess. Gen. Ch. *Cal.* 2-labiatus: $\frac{1}{3}$. *Legumen* ovatum, compressum.

Sp. Ch. G. leguminibus glabris, stipulis nullis, foliolo impari petiolato.

THE root is perennial, long, round, succulent, tough, running to a considerable extent, externally brown, internally yellow, and of a sweet taste: the stalks are erect, strong, herbaceous, striated, garnished with few branches, and usually rise four or five feet in height: the leaves are pinnated, alternate, composed of several pairs of pinnæ, with an odd one at the end: the leafits are ovate, blunt, veined, of a pale green colour, and stand upon short footstalks: the flowers are of the papilionaceous kind, of a purplish colour, and appear in long spikes arising from the axillæ of the leaves: the calyx is persistent, tubular, cut obliquely into two lips, and divided into narrow pointed segments: the corolla consists of a *vexillum*, which is erect, lance-shaped, concave, obtuse; two *alæ*, which are oblong, obtuse, and larger than the *carina*, which is about the length of the calyx: the filaments are ten, nine of which are joined at the base, and all furnished with simple roundish antheræ: the germen is shorter than the calyx, and is

Glycyrrhiza glabra

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supplied with a tapering style, terminated by a blunt stigma: the seeds are small, kidney-shaped, and produced in a pod, which is oblong, compressed, pointed, one-celled. The flowers appear in August.

Liquorice is a native of the South of Europe: it appears to have been cultivated in Britain in the time of Turner.[a] The chief places at which it has long been propagated for sale, are Pontefract in Yorkshire, Worksop in Nottinghamshire, and Godalming in Surry; but it is now planted by many gardeners in the vicinity of London, by whom the metropolis is supplied with the roots, which, after three years growth, are dug up for use, and are found to be in no respects inferior for medical purposes to those produced in their native climate.

Liquorice root, lightly boiled in a little water, gives out nearly all its sweetness: the decoction, pressed through a strainer, and inspissated with a gentle heat till it will no longer stick to the fingers, affords a better extract than that brought from abroad, and its quantity amounts to near half the weight of the root.[b] Rectified spirit takes up the sweet matter of the Liquorice equally with water; and as it dissolves much less of the insipid mucilaginous substance of the root, the spirituous tinctures and extracts are proportionably sweeter than the watery.[c]

This root contains a great quantity of saccharine matter,* joined with some proportion of mucilage; and hence has a viscid sweet taste. From the time of Theophrastus[d] it has been a received

[a] Vide *Tourn. Herb. part.* 2. *fol.* 12. published in 1562.

[b] If the Liquorice be long boiled, its sweetness is greatly impaired, and the preparation contracts an ungrateful bitterness and black colour.

[c] *Lewis, M. M.*

* This matter, according to Lewis, differs from that of other vegetables, "in being far less disposed to run into fermentation." *L. c.*

[d] Hence it was named ἀδιψον, and the root directed to be chewed in dropsies and other disorders where great thirst prevailed. Vide *Theoph. L.* 9. *cap.* 13. Also noticed by *Pliny*, *Lib.* 22. *c.* 9.

opinion that it very powerfully extinguishes thirst: this, if true, is the more remarkable, as sweet substances in general have a contrary effect.* It is in common use as a pectoral or emollient in catarrhal defluctions on the breast, coughs, hoarsenesses, &c. " Infusions or extracts made from it afford likewise very commodious vehicles or intermedia for the exhibition of other medicines: the Liquorice taste concealing that of unpalatable drugs more effectually than syrups or any of the sweets of the saccharine kind."[f]

* Dr. Cullen says, " to explain this, I observe that in the sweet of Liquorice, separated from the root, I do not find that it quenches thirst more than other sweets; and I take the mistaken notion to have arisen from this, that if a piece of the root is chewed till the whole of the sweetness is extracted, that further chewing brings out the acrid and bitterish matter, which stimulates the mouth and fauces, so as to produce an excretion of fluid, and thereby takes off the thirst which the sweetness had produced." *M. M. vol. ii. p.* 407. [f] *Lewis, l. c.*

DOLICHOS PRURIENS. COWHAGE DOLICHOS.

SYNONYMA. Dolichos. *Pharm. Edinb.* Phaseolus Zurratensis siliqua hirsuta, Couhage dicta. *Raii Hist. p.* 887. Phaseolus americanus, foliis molli lanugine obsitis, siliquis pungentibus, semine fusco punctato. *Pluk. Phyt. p.* 214. *f.* 1. Phaseolus utriusque Indiæ, lobis villosis pungentibus minor. *Sloane Jam. vol.* 1. *p.* 37. Phaseolus virgatus hirsutus prurigineus. *Plum. Spec.* 8. Stizolobium spicis multifloris pendulis alaribus, floribus ternatis. *Browne Jam. p.* 290. Cacara pruritus. *Rumph. Amb. vol.* 5. *p.* 393. *t.* 142. Nai-corana. *Hort. Mal. vol.* 8. *p.* 61. *t.* 35. Dâu ngûa. *Flor. Cochin. p.* 438. *Conf. Jacquin. Amer. pict. p.* 99. *t.* 188. Kerr. *Med. Comment. vol. ii. p.* 202.

Class Diadelphia. *Ord.* Decandria. *Lin. Gen. Plant.* 867.

Lobelia pratensis.

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Ess. Gen. Ch. *Vexilli* basis callis 2, parallelis, oblongis, alas subtus comprimentibus.

Sp. Ch. D. volubilis, legum. racemosis: valvulis subcarinatis hirtis, pedunculis ternis.

THE root is perennial, fibrous: the stem is herbaceous, climbing, cylindrical, hairy, divided into many branches, which twist round the neighbouring trees, and rise to a considerable height: the leaves are ternate, and stand upon long footstalks, placed alternately at the distance of a foot from each other: each pinna, or lobe, is entire, ovate, pointed, smooth on the upper side, on the under hirsute; the lateral lobes are oblique, and somewhat larger than that in the middle, which is of a rhomboidal shape: the proper footstalks are short, and furnished with small stipulæ: the flowers are large, of a purplish or violet colour, and placed mostly in ternaries upon short peduncles, and form pendant spikes, which arise from the axillæ of the leaves, and are about a foot in length: the calyx is bell-shaped, gibbous at the base, lax, downy, divided into two lips, of which the upper is semi-ovate; the under separates into three lance-shaped segments: the corolla is of the papilionaceous order, consisting of a *vexillum* (standard) which is roundish, entire, concave, obtuse, and double the length of the calyx: two *alæ* (wings) which are oblong, obtuse, concave, and twice the length of the vexillum; a *carina* (keel) which is scythe-shaped, of the length of the alæ, compressed, and at the apex furnished on each side with a short concave spur: the filaments are ten, nine of which are united at the base; they are alternately longer and shorter; the former are four times the breadth of the others, and supplied with incumbent antheræ; but the antheræ of the latter are placed vertically: the germen is oblong, villous, and supports a slender style about the length of the filaments, terminated by a small orbicular stigma: the fruit is an oblong pod, in the form of the letter *ſ*, four or five inches in length, covered with

brown bristly hairs, and containing four, five, or six seeds, of a brownish colour. The flowers appear in September and October.

The plant, known by the name of Cow-itch, Couhage, and Cowhage, is referred by Bergius and Miller to the Dolichos urens of Linnæus; and this error is also to be found in Aiton's Hortus Kewensis.

The pods of both D. urens and D. pruriens are beset with setaceous hairs, but of the former these are shorter, and very thinly scattered over the pod, which is keel-shaped, much longer, and more than twice the breadth of that of the latter, and marked transversely with deep furrows. These circumstances show, that the D. urens is widely different from the officinal Cowhage here figured, which is a native of both Indies, and appears to have been cultivated in England in the time of Ray by Mr. Charles Hatton;* and the plant is now growing in the apothecaries garden at Chelsea; but we cannot learn that it has ever been known to produce perfect flowers in our garden stoves: so that for the very correct figure subjoined to this sheet we are indebted to the liberality of Sir Joseph Banks, in whose herbarium we found an excellent specimen of the plant.

The sharp hairs of the pod readily penetrate the skin, and cause a very troublesome itching, a mischievous purpose to which in this country they have been long chiefly converted. But the violent irritation which these hairs produce upon the external skin has not deterred practitioners from administering them internally, especially in the West Indies, where they have been generally employed for many years as a safe and efficacious anthelmintic; and with a view to this effect they are now admitted into the Materia Medica of the Edinburgh Pharmacopœia.

Sir Hans Sloane, who has noticed the diuretic qualities of the

* Terræ commissa in horto *D. Caroli Hatton* plantas produxere. Vide *Raii. Hist. p.* 887. In the *Hort. Kew.* D. pruriens is said to have been first introduced here by Mr. Gilbert Alexander: this mistake was probably caused by confounding the D. pruriens with the D. urens.

roots and pods of this plant, observes, that an infusion of the latter "is a certain remedy for the dropsie;"[b] but he takes no notice of the vermifuge effects of Cowhage: Browne however has informed us, that "in the Windward Islands some of the inhabitants make "a syrup of the pods, which is said to be very effectual against "worms." But as little attention would be paid to an observation so vague and unsatisfactory as this, we are to consider Mr. Bancroft as the first person whose writings tended to establish the anthelmintic character of Cowhage in Europe. He tells us, "the part used is "the setaceous hairy substance growing on the outside of the pod, "which is scraped off, and mixed with common syrup or molasses, "to the consistence of a thin electuary, of which a tea-spoonful "to a child of two or three years old, and double the quantity to "an adult, is given in the morning fasting, and repeated the two "succeeding mornings; after which a dose of rhubarb is usually "subjoined. This is the empyrical practice of the planters, who "usually once in three or four months exhibit the Cow-itch in "this manner to their slaves in general, but especially to all their "children without distinction; and in this manner I have seen it "given to hundreds from one year old and upwards with the most "happy success. The patients, after the second dose, usually "discharged an incredible number of worms, even to the amount "of more than twenty at a time, so that the stools consisted of "little else than these animals." He concludes by saying, "It is "to be observed, that this remedy is particularly designed against "the long round worm; whether it is equally deleterious to the "ascarides, or whether it has ever been used against them, I am "uncertain."[c] Farther accounts, shewing the efficacy of this medicine, have since appeared in the Medical Commentaries,[d] and in a treatise, professedly written on the subject by Mr.

[b] He also informs, that this remedy was successfully used in the East Indies by Mr. Buckley. *L. c.*

[c] Vide his Essay on the natural history of Guiana in South America.

[d] See *Vol. ii.*

Chamberlaine,[e] to which a number of cases is subjoined, and to which great additions lately have been made on various and indubitable authorities, proving the Cowhage to be not less successful here than in the warmer climates of which it is a native; and that all the different kinds of worms, known to infest the primæ viæ, have been expelled by this anthelmintic.

The manner in which these hairy spiculæ act as a vermifuge, seems to be purely mechanical; for neither the tincture, nor the decoction, possesses the least anthelmintic power.[f]

[e] Practical treatise on the efficacy of Stizolobium or Cowhage, published in 1785. As the Cowhage is seldom to be met with at the druggists, Mr. C. informs those who wish to give it a trial, that it is to be had at his house in Aylesbury street, Clerkenwell.

[f] The following experiment, made by Mr. Chamberlaine, illustrates this opinion: "A calabash, full of very large worms of the *teres* kind, in full vigour, voided by a poor emaciated patient, was brought to me. Among these, I sprinkled some of the setæ. For a minute or two no visible effect was produced; but in a little time they began to writhe and twist themselves in an unusual manner, and exhibited evident signs of extreme torture. I took one of the worms, and viewing it through a magnifying glass, perceived that several of the setæ had pierced very deep, and others were sticking loosely in various parts of its body, but that none of the spiculæ, which had once entered into the skin, dropped off." *L. c.*

TRIGONELLA FŒNUM GRÆCUM. FENUGREEK.

SYNONYMA. Fœnum græcum. *Pharm. Lond. & Edinb. Gerard. Emac. p.* 1196. *Raii. Hist. p.* 954. Fœnum Græcum sativum. *Bauh. Pin. p.* 348. Medicago leguminibus subsolitariis sessilibus erectis reflexo-falcatis acuminatis. *Hort. Cliff. p.* 376.

Class Diadelphia. *Ord.* Decandria. *Lin. Gen. Plant.* 898.

Ess. Gen. Ch. *Vexillum* et *Alæ* subæquales, patentes, forma corollæ 3-petalæ.

Trigonella Foenum graecum

Published by R. Phillips

Sp. Ch. T. leguminibus sessilibus strictis erectiusculis subfalcatis acuminatis, caule erecto.

THE root is annual, long, tapering, whitish, and fibrous: the stalk is erect, round, smooth, beset with soft hairs, often branched, and rises about two feet in height: the leaves are oblong, obtuse, slightly serrated, of a disagreeable smell, and stand in ternaries upon the common footstalks, which are placed alternately: the flowers are white, and appear in pairs at the alæ of the leaves: the calyx is funnel-shaped, striated, covered with white hairs, and divided at the brim into five narrow pointed segments: the corolla is of the papilionaceous kind, consisting of a vexillum or upper petal, which is oblong, erect, concave at the base, and indented at the apex: two alæ or lateral petals, which are entire, oval, reflexed, and elongated at the base; a carina or under petal, which is small, and of an orbicular form: the filaments are ten, nine of which are united, and all furnished with simple antheræ: the germen is sword-shaped, terminated by a short tapering style, which is furnished with a simple stigma: the pericarpium is a long compressed falcated pod, containing numerous rhomboidal seeds, of a brownish yellow colour. It flowers from June till August.

This plant is said to be a native of Montpelier, and to have been first cultivated in Britain by Gerard.[a] In dry seasons it maturates its seeds here very well, and, judging by our own experience, we think it might be cultivated to great advantage in this country.‡ The seeds of Fenugreek are brought to us from the southern parts of France and Germany, where they are annually sown for the purpose of exportation to different places.

" Fenugreek seeds have a strong disagreeable smell, and an unctuous farinaceous taste, accompanied with a slight bitterishness. An ounce renders a pint of water thick and slimy. To rectified

[a] *Hort. Kew.*

‡ Miller has given directions for cultivating this plant. See *Dict.*

spirit they give out the whole of their distinguishing smell and taste, and afterwards to water a strong flavourless mucilage."[b]

These seeds are never given internally, their principal use being in cataplasms and fomentations, for softening, maturating, and discussing tumours; and in emollient glysters. They were also an ingredient in the *oleum e mucilaginibus* of the shops: but this has no longer a place in the pharmacopœia.

[b] *Lewis, M. M. p.* 304.

ASTRAGALUS EXSCAPUS. STEMLESS MILK VETCH.

SYNONYMA. Astragalus exscapus. *Off. Murray. vi.* 83. *Jacquin Collect. ad bot. vol.* 2. *p.* 269. *Icon, ejusd. Plant. rar. vol.* 2. *fasc.* 1. *t.* 17. * *Cf. Winterl. Ind. Hort. bot. Pestin. p.* 14. Astragalus perennis supinus, foliis et siliquis hispidis, flore luteo. *Knauth. Fl. Hal. p.* 41. *Buxbaum. Pl. Hal. p.* 32. Cicer montanum ακαυλον. *Bauh. Pin.* 341. Glaux lanuginosa montana acaulos. *Rupp. Fl. Jen. ed. Hall.* 270. *Ic. Girtanner. l. c. inf.*

Diadelphia Decandria. *Lin. Gen. Plant.* 892.

Gen. Ch. *Legumen* biloculare, gibbum.

Sp. Ch. A. acaulis exscapus, leguminibus lanatis, foliis villosis.

ROOT perennial, simple, or generally branched towards the extremity; very long, slender, running deeply in the ground. Leaves all radical, long, pinnated, consisting of numerous pinnæ, which are regular, ovate, opposite, villous, entire, gradually smaller towards the top of the leaf, at which stands a single leafit. The flowers are large, of a pale yellow colour, and placed at the crown of the root. Calyx tubular, deeply cut into five long

Astragalus caricinus

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pointed teeth. Corolla papilionaceous, consisting of the vexillum, which is large, straight, closing, emarginated at the apex, two alæ or oblong lateral petals, and a short blunt carina or keel-shaped under-petal. Filaments ten, nine of which are united, and all furnished with small roundish antheræ. Germen oblong. Style tapering, bent upwards, and supplied with a blunt stigma. Pod oblong, hairy, two-valved, containing kidney-shaped seeds.

This species of Astragalus is a native of Hungary, growing in mountainous situations. It was first introduced into the Royal Garden at Kew by Jacquin in 1787.[a]

The root, which is the medicinal part of the plant, is, in its dried state, rough, and wrinkled, in long slender pieces, externally brown, internally white, and easily dividing longitudinally into filamentous fibres. It is destitute of odour, but to the taste it is bitterish, and somewhat astringent. In decoction its taste approaches to that of liquorice; some however compare its flavour to that of bitter almonds.[b] It yields about a third part of its weight of extract by means of water, but by spirit a very inconsiderable quantity is obtained.

Since the year 1786 this plant has been much celebrated as a remedy in syphilitic complaints. It was first brought into notice by Professor Winterl, at Pest, who wrote to his friends in Vienna, that on the borders of Hungary it was in common use as a remedy for the venereal disease; in consequence of this information it was tried with success at the General Hospital by Quarin.* From Vienna its reputation spread over all Germany; nor does its character rest wholly on the testimony of foreigners, as Dr. Crighton,‡ during his residence at Vienna had occasion to witness its efficacy. This root is employed in decoction in the proportion

[a] See *Hort. Kew.*

[b] Endter. *Diss. de Astrag. exscapo. p.* 12.

* Vide *Animadv. pract.*

‡ Dr. C's letter is published by Girtanner, and in the London Med. Journ. v. 9. 405.

of half an ounce to a pint of water, and taken warm night and morning: it is also occasionally to be used externally. By persevering a few weeks in the use of this decoction, we are told that, without mercury, the various symptoms of the most inveterate syphilis, as nodes, exostoses, tophi, scabies, venereal blotches, buboes, ulcers, &c. have been effectually cured. Besides the authors above noticed, we may remark, that the subsequent publications of Endter,[d] Wegerich,[e] Girtanner,[f] Werner,[g] Tietz,[h] Carmanti,[i] all tend in some measure to confirm the efficacy of this root.

Its use is perfectly safe; and Carmanti and others found it necessary to make the decoction much stronger than that before mentioned. Professor Hunczowsky, though unable to discover its anti-venereal powers, admits it to be an useful remedy in rheumatism.

Its sensible effects are an increase of the cutaneous and urinary discharges.

[d] *L. c.* [e] *Diss. de Astragali exscapi radice. Erf.* 1789.

[f] *Abh. über d. vener. krankh. vol. i. p.* 406. *& seq.*

[g] See *Diss. de virtute Saponariæ off.* 1789.

[h] Vide *Diss. de virtute Astrag. &c.* 1790. [i] Vide *Opusc. therapeut. v.* 2.

PTEROCARPUS SANTALINUS. RED SAUNDERS TREE.

SYNONYMA. Santalum rubrum. *Pharm. Lond. & Edinb.* Sandalum rubrum. *Rumph. Amb. vol.* 2. *p.* 47. Moutouchi suberosa. *Aublet. Guian. vol.* 2. *p.* 742. *t.* 200. Conf. *Supp. Plant.* 318.

Diadelphia Decandria. *Lin. Gen. Plant.* 854.

Gen. Ch. Cal. 5-dentatus. *Caps.* falcata, foliacea, varicosa. *Sem.* aliquot solitaria.

Thermopsis rhombifolia.

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Sp. Ch. P. foliis ternatis subrotundis retusis glaberrimis, petalis crenatis undulatis.

A LARGE tree, sending off lofty alternate branches, and covered with rough bark, resembling that of common alder. Leaves alternate, on footstalks, in our specimen placed in pairs, and divided into three simple leaves, but according to the *Supp. plant.* the leaves are three together, and each separating into four or five alternate pinnæ: simple leaves roundish or ovate, blunt, retuse, or somewhat notched at the apex, entire, veined, above smooth, beneath hoary. Flowers yellow, in axillary spikes. Stipulæ none. Bracteæ none. Calyx rough, cut at the brim into five short segments. Corolla papilionaceous; vexillum obcordate, erect, somewhat reflexed at the sides, dentated, waved, yellow, striated with red; alæ spreading, edges appearing toothed; carina oblong, a little inflated, short. Filaments ten, diadelphous, furnished with white round antheræ. Germen on a footstalk, oblong, compressed, hairy. Style curved. Stigma obtuse. Pod roundish, compressed, smooth, falcated upwards, lower margin keel-shaped, containing a round compressed seed.

This tree is a native of India, affecting mountainous situations.

Its characters were first ascertained by König, who sent a specimen and description of it to the younger Linnæus, by whom it is published in the Species plantarum.

The annexed figure is taken from a very perfect specimen in the Herbarium of Sir Joseph Banks.*

There is reason to believe, that several red woods, capable of communicating this colour to spirituous liquors, are sold as Red Saunders; but the true officinal kind appears, on the best authority, to be of this tree, which is extremely hard, of a bright garnet red colour, and bears a fine polish. It is only the inner substance of the wood that is used as a colouring matter, and the more florid

* The specimen is accompanied with a piece of the wood, which answers to the description here given.

red is most esteemed. On being cut it is said to manifest a fragrant odour, which is more especially perceptible in old trees.

According to Lewis, this wood "is of a dull red almost blackish colour on the outside, and a deep brighter red within; its fibres are now and then curled, as in knots. It has no manifest smell, and little or no taste: even of extracts made from it with water, or with spirit, the taste is inconsiderable. To watery liquors it communicates only a yellowish tinge, but to rectified spirit a fine deep red: a small quantity of an extract, made with this menstruum, tinges a large one of fresh spirit of the same elegant colour; though it does not, like most other resinous bodies, dissolve in expressed oils: of distilled oils, there are some, as that of lavender, which receive a red tincture from the wood itself, and from its resinous extract, but the greater number does not."[b]

Red Saunders has been esteemed as a medicine; but its only use attaches to its colouring property.

The juice of this tree, like that of some others, affords a species of sanguis draconis.

[b] *M. M.* 579.

The medicinal plants of this order, which remain unnoticed, are

Systematic Names.	Officinal.	English.
Lupinus albus	Lupinus	White Lupine
Genista canariensis	Rhodium Lignum	Rhodium Wood
Ononis arvensis	Ononis	Rest-Harrow
Vicia Faba	Faba	Garden-bean
Ervum Lens	Lentes	Lentil, or flat Tare
Ervum Ervilia	Ervum	Officinal Tare
Cicer arietinum	Cicer	Chick Pea
Galega officinalis	Galega	Goat's-rue
Trifolium melilotus off.	Melilotus	Melilot Trefoil

Mimosa Catechu.

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ORD. XXV. LOMENTACEÆ.

(From *Lomentum*, a colour used for painting)

As many of the plants of this order afford beautifully coloured tinctures, and some of them much used in dyeing.

MIMOSA CATECHU. CATECHU MIMOSA.

Ex hujus plantæ lingo paratur *Catechu*, vulgo *Terra Japonica. Pharm. Lond. & Edinb.*

SYNONYMA. Mimosa Cate; spinis duabus stipularibus, foliis bipinnatis 15-30 jugis, foliolis 40 jugis, spicis elongatis axillaribus. Vide *Murray App. Med. vol. ii. p.* 415. *Coira* vel *Caira* in Provincia Bahar dicitur. See *Kerr's* "Description of the Plant from which the *Terra Japonica* is extracted. *Med. Obs. & Inquir. vol. v. p.* 151. *Suppl. Plant. p* 439.

Class Polygamia. *Ord.* Monoecia. *Lin. Gen. Plant.* 1158.

Ess. Gen. Ch. *Hermaph.* *Cal.* 5-dentatus. *Cor.* 5-fida. *Stam.* 5 s. plura. *Pist.* 1 Legumen.

Masc. *Cal.* 5-dentatus. *Cor.* 5-fida. *Stam.* 5, 10, plura.

Sp. Ch. M. spinus stipularibus, foliis bipinnatis multijugis: glandulis partialium singulis, spicis axillaribus geminis s. ternis pedunculatis. *Syst. Veg. ed.* 14.

ACCORDING to Mr. Kerr, this small tree grows to twelve feet in height, and to one foot in diameter; it is covered with a thick rough brown bark, and towards the top divides into many close branches: the leaves are bipinnated, or doubly winged, and are placed alternately upon the younger branches: the partial pinnæ are nearly two inches long, and are commonly from fifteen to thirty pair, having small glands inserted between the pinnæ: each wing is usually furnished with about forty pair of pinnulæ or linear lobes, beset with short hairs: the spines are short, recurved, and placed in pairs at the bases of each leaf: the flowers are hermaphrodite and male, and stand in close spikes, which arise from the axillæ of the leaves, and are four or five inches long: the calyx is tubular, hairy, and divides at the limb into five oval pointed segments; the corolla is monopetalous, whitish, and of the same form as the calyx, but twice its length: the filaments are numerous, capillary, double the length of the corolla, adhering at the base of the germen, and crowned with roundish antheræ: the germen is oval, and supports a slender style, which is of the length of the filaments, and terminated by a simple stigma: the fruit, or pod, is lance-shaped, brown, smooth, compressed, with an undulated thin margin; it contains six or eight roundish flattened seeds, which produce a nauseous odour when chewed. This tree grows plentifully on the mountainous parts of Indostan, where it flowers in June.

An Indian drug, known by the name of Terra Japonica, and now more properly called Catechu, has long been an officinal medicine in Europe; and though soon discovered by chemical analysis to be of vegetable origin, yet neither was the plant from which it is produced, nor the process by which it is prepared, sufficiently ascertained for near a century afterwards. Writers on the Materia Medica very generally, from the time of Clusius, considered the Catechu to be extracted from the seeds of a nut, the produce of a species of palm; (Areca, or Beetle-nut) and conformably to this opinion, Linnæus, in both the editions of his Mat. Med. refers this

drug to the "Areca *Catechu* frondibus pinnatis, foliolis replicatis oppositis præmorsis." We are told however by Mr. Kerr, that in the Province of Bahar, where the Terra Joponica is manufactured, the price of the Areca-nut far exceeds that of the Catechu.[a] But he thinks it probable that where this nut is in great plenty, "they may perhaps join some of the fruit in making the extract, to answer a double purpose, for the most frequent use of both is in chewing them together, as Europeans do tobacco; to these two substances they add a little shell lime, and a leaf called *Pauw*."[b] Cleyerus and Herbert de Jager,[c] more especially the latter, have asserted, that the Catechu is not extracted from one tree only, but from almost all the species of Acacia, whose bark is astringent and reddish, and from many other plants, which by boiling yield a juice of the like sort; and though these extracts differ considerably, yet in India they are all denominated Khaath or Catechu.‡ But the tree which affords the best extract, according to his description appears evidently to be a Mimosa.[d]

In this uncertainty our knowledge concerning the production of Terra Japonica still remained, till Mr. Kerr (assistant surgeon to the civil hospital at Bengal) transmitted an account of this substance, which completely removed every doubt respecting its origin. In this account we are told, that he not only carefully

[a] Mr. Kerr says, if the Terra Japonica were extracted from this nut, it would be twenty times dearer than in the present sales. Vide l. c.

[b] Hence the following lines:

Quis foliis credat commixta calce tenellis,
Cum fructu hoc Indos vesci, unde ore cruento
Purpureum ejiciunt succum, tam dentibus atris
Horrendum arringunt, & dentibus ore minantur?

[c] Vide *Misc. Nat. Cur. Dec.* 2. *Ann.* 4. *Obs.* 3. & *Dec.* 2. *Ann.* 3. *p.* 8.

‡ The derivation of the word Catechu seems to favour this opinion; *Cate*, in the oriental language, signifies a tree, and *Chu*, juice.

[d] According to the Linnæan nomenclature we have no genus under the name *Acacia*. But the Mimosas are very numerous, and that most known in Europe is the M. pudica, or humble *sensitive plant*, and the remarkable contractions which

attended to the process of the manufacturer in the preparation of Catechu, but that he actually repeated it himself; and upon the faith of the figure and description of the plant which he has given, and from which he prepared the Catechu, the younger Linnæus has admitted it into the Supp. Plant. under the name of Mimosa Catechu; and we have accordingly figured the plant. The preparation of the extract is stated by Mr. Kerr to be as follows: "After felling the trees, the manufacturer carefully cuts off all the exterior white part of the wood. The interior coloured wood is cut into chips, with which he fills a narrow-mouthed unglazed earthen pot, pouring water upon them until he sees it among the upper chips; when this is half evaporated by boiling, the decoction, without straining, is poured into a flat earthen pot, and boiled to one third part; this is set in a cool place for one day, and afterward sevaporated by the heat of the sun, stirring it several times in the day; when it is reduced to a considerable thickness, it is spread upon a mat or cloth, which has previously been covered with the ashes of cow dung; this mass is divided into square or quadrangular pieces by a string, and completely dried by turning them frequently in the sun, until they are fit for sale."[e]

it manifests upon being touched, or even approached, induced my ingenious friend Dr. Marshal, to dissect the moving fibres. In his letter to me, he says, "I have made two or three dissections (more to gratify the curiosity of the "moment than to ascertain any discovery) of the fleshy joints of the Mimosa "pudica; branch is articulated with stem, petiolus with branch, and petiolus of "the leafit with the common petiolus. Within the fleshy substance of the joint "are found numerous white threads, which go from one articulated body to "the other, inserted into both. These it would appear, are the irritable fibres, "by which the motions are performed."

[e] "In making the extract, the pale brown wood is preferred, as it produces the fine whitish extract: the darker the wood is, the blacker the extract, and of less value. They are very careful in drying their pots upon the fire, before they are used; but very negligent in cutting their chips upon the ground, and not straining the decoction, by which, and the dirty ashes they use, there must be a considerable quantity of earth in the extract, besides what avarice may prompt them to put into it." *Kerr l. c.*

This extract is called *Cutt* by the natives, by the English *Cutch*, and by different authors Terra Japonica, Catechu, Khaath, Cate, Cachou, &c. "In its purest state it is a dry pulverable substance, outwardly of a reddish colour, internally of a shining dark brown, tinged with a reddish hue; in the mouth it discovers considerable astringency, succeeded by a sweetish mucilaginous taste. According to Lewis, "it dissolves almost totally in water, excepting the impurities; which are usually of the sandy kind, and amounting in the specimens I examined to about one-eighth of the mass. Of the pure matter, rectified spirit dissolves about seven-eighths into a deep red liquor: the part which it leaves undissolved, is an almost insipid mucilaginous substance."[f] "Catechu may be usefully employed for most purposes where an astringent is indicated, provided the most powerful be not required. But it is particularly useful in alvine fluxes; and where these require the use of astringents, we are acquainted with no one equally beneficial. Besides this, it is employed also in uterine profluvia, in laxity and debility of the viscera in general, in catarrhal affections, and various other diseases where astringents are necessary. It is often suffered to dissolve leisurely in the mouth, as a topical astringent for laxities and exulcerations of the gums, for apthous ulcers in the mouth, and similar affections."[g] "This extract is the basis of several fixed formulæ in our pharmacopœias, par-

[f] Lewis's M. M. p. 642.

[g] See Duncan's *Edinb. New Dispens.* p. 167.

The antiseptic quality of Catechu appears from the experiments made by Sir John Pringle. (*Vide Diss. of the Army, App. Exp.* 10.) Huxham employed it successfully in cases where a putrid dissolved state of the blood prevailed. This extract is the principal ingredient in an ointment of great repute in India, composed of Catechu four ounces, alum nine drams, white resin four ounces; these are reduced to a fine powder, and mixed with the hand, adding olive oil ten ounces, and a sufficient quantity of water, to bring the mass to the consistence of an ointment. To all sores and ulcers in warm climates astringent applications of this kind are found to be peculiarly useful. See *Kerr l. c.*

ticularly of a tincture and an electuary: but one of the best forms under which it can be exhibited, is that of a simple infusion in warm water, with a proportion of cinnamon or cassia; for by this means it is at once freed from its impurities, and improved by the addition of the aromatic."

MIMOSA NILOTICA. EGYPTIAN MIMOSA, ACACIA, EGYPTIAN THORN.

Gummi Arabicum, *Pharm. Lond. & Edinb. sponte ex hac planta fluit.*

SYNONYMA. Acacia vera. *J. Bauh. Hist. vol. i. p.* 429. Acacia foliis scorpioides leguminosæ. *Bauh. Pin.* 392. Acanthus Theophrasti. *Raii Hist. p.* 976. Acacia vera sive spini Ægyptiaca. *Park. Theat. p.* 1547. Acacia vera s. Spina Ægyptiaca, subrotundis foliis flore luteo; siliqua paucioribus isthmis glabris nigricantibus. *Pluk. Alm.* 3. *t.* 123. *f.* 1. Acacia Ægyptiaca siliquis Lupini, floribus luteis. *Herm. Parad. Bat. Prod.* 303. Conf. *Hasselq. it. p.* 475. Ακακια *Dioscorid. L.* 1. *cap.* 133.

Class Polygamia. *Ord.* Monoecia. *Lin. Gen. Plant.* 1158.

Ess. Gen. Ch. Hermaph. Cal. 5-dentatus. *Cor.* 5-fida. *Stam.* 5 s. plura. *Pist.* 1. *Legumen.*

Masc. Cal. 5-dentatus. *Cor.* 5-fida. *Stam.* 5, 10, plura.

Sp. Ch. M. spinis stipularibus patentibus, foliis bipinnatis: partialibus extimis glandula interstinctis, spicis globosis pedunculatis.

THIS, like the preceding species of Mimosa, rises several feet in height: it is covered with smooth bark of a grey colour, and that of the branches has commonly a purplish tinge: the leaves are bipinnated, and placed alternately: the partial pinnæ are oppo-

Mimosa nilotica

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site, furnished with a small gland between the outermost pair, and beset with numerous pairs of narrow elliptical pinnulæ, or leafits: the spines are long, white, spreading, and proceed from each side of the base of the leaves: the flowers are hermaphrodite and male, they assume a globular shape, and stand four or five together upon slender peduncles, which arise from the axillæ of the leaves: the calyx is small, bell-shaped, and divided at the mouth into five minute teeth: the corolla consists of five narrow yellowish segments: the filaments are numerous, capillary, and furnished with roundish yellow antheræ: the germen is conical, and supports a slender style, crowned with a simple stigma: the fruit is a long pod, resembling that of the Lupine, and contains many flattish brown seeds. It is a native of Arabia and Egypt, and flowers in July.[a]

Dioscorides was certainly well acquainted with this tree, as he not only mentions the gum which it produces, but also the renowned *Acaciæ veræ succus,*[b] obtained from its pods; since his time, however, it has been thought that gum arabic is not the production of the Acacia or Mimosa, as it is now called; but the accounts given by Alpinus, and those of subsequent naturalists, leave no doubt upon this subject.[c]

Although the Mimosa nilotica grows in great abundance over the vast extent of Africa, yet gum arabic is produced chiefly by

[a] The M. nilotica was cultivated in England by Evelyn in 1664. Kalend. h. p. 75.

A plant of this species is now in the Royal Garden at Kew, about four feet in height: and in Dr. Lettsom's garden at Grove Hill, where it flowers annually.

[b] The pod, and manner of preparing the juice, are thus mentioned by Murray: "Ex fructu elicitur, qui ipse legumen est complanatum viridi brunum, quatuor vel quinque pollices longum et octies vel decies angustius, compositum ex sex vel decem partibus vel articulis discoideis et intra utramque cuticulam parenchyma gummosum rubicundum continens. In quovis articulo latet semen ellipticum sulco utrinque pariter elliptico notatum. Succus exprimitur ex fructu immaturo in mortario contuso, et calore in spissitudinem extracti densatur," &c. *Vide App. Med. vol. ii. p.* 412.

[c] Hasselquist. Adanson, Sparrman, and others.

those trees, which are situated near the equatorial regions; and we are told that in Lower Egypt the solar heat is never sufficiently intense for this purpose.[d] The gum exudes in a liquid state from the bark of the trunk and branches of the tree, in a similar manner to the gum which is often produced upon the cherry trees, &c. in this country; and by exposure to the air it soon acquires solidity and hardness. In Senegal the gum begins to flow when the tree first opens its flowers,[e] and continues during the rainy season till the month of December, when it is collected for the first time. Another collection of the gum is made in the month of March, from incisions in the bark, which the extreme dryness of the air at that time is said to render necessary.[f]

Gum arabic is now usually imported into England from Barbary, not packed up in skins, which was the practice in Egypt and Arabia, but in large casks or hogsheads. The common appearance of this gum is so well known as not to require any description of it here; and the various figures which it assumes seem to depend upon a variety of accidental circumstances attending its transudation and concretion.

Gum Arabic of a pale yellowish colour is most esteemed; on the contrary, those pieces which are large, rough, of a roundish figure, and of a brownish or reddish hue, are found to be less pure, and are said to be produced from a different species of Mimosa: (M. Senegal) but the Arabian and Egyptian gum is commonly intermixed with pieces of this kind, similar to that which comes from the coast of Africa, near the river Senegal. Gum Arabic does not admit of solution by spirit or oil, but in twice its quantity of water it dissolves into a mucilaginous fluid, of the consistence of a thick syrup, and in this state answers many useful pharmaceutical purposes, by rendering oily, resinous, and pinguious substances, miscible with water.[g]

[d] Niebuhr Reisebesch. Arab. 1. B. p. 143.

[e] Adanson Mem. de l'Ac. d Sc. d. Paris, 177. 3. p. 8.

[f] Demanet Nouvelle Hist. de l'Afrique Françoise, t. 1. p. 56.

[g] See Mr. French's Experiments in Lond. Med. Observ. vol. 1. p. 413, &c.

The glutinous quality of gum arabic is preferred to most other gums and mucilaginous substances as a demulcent, in coughs, hoarsenesses, and other catarrhal affections, in order to obtund irritating acrimonious humours, and to supply the loss of abraded mucus. It has been very generally employed in cases of ardor urinæ, and stranguary: but it is the opinion of Dr. Cullen, "that even this mucilage, as an internal demulcent, can be of no service beyond the alimentary canal. In common practice hardly more than a few ounces are given in one day; and what that can give of a mucilaginous quality to many pounds of serosity, I leave my intelligent reader to judge. Still, however, it may not be thought enough to reason *a priori,* and I should say, what experience has actually taught. What others may have observed, I cannot determine; but, for myself I can assert, that, in innumerable trials, I have never observed the effects of gum arabic in the mass of blood, or in the excretions derived from it. The most frequent occasion for its use is in the ardor urinæ; and in that I have been often disappointed, and have often found that two pounds of water or watery liquors added to the drink, would be of more service than four ounces of gum arabic taken in without such addition."[h]

This gum is an ingredient in the Hartshorn decoction, the chalk Julep, the common emulsion, and some of the troches as directed in our Pharmacopœias.

[h] Mat. Med. p. 415. vol. 2.

Gum Arabic has been found a good substitute for food; and Dr. Sparrman tells us, that he pointed out this gum to the Hottentots, "which they might gather in many spots thereabouts from the Mimosa nilotica; but this was a species of food very well known to them, and which they had often tried.—When in want of other provisions, the Boshies-men are said to live upon this for many days together."—Voyage to the Cape, vol. ii. p. 23.

CASSIA SENNA. SENNA, Or, EGYPTIAN CASSIA.

SYNONYMA. Senna. *Pharm. Lond. & Edinb.* Senna Alexandrina, sive foliis acutis. *Bauh. Pin. p.* 397. *Morris Hist. t. ii. p.* 201. *sect.* 2. *tab.* 24. *f.* 1. *Raii Hist. p.* 1742. Senna (Alexandrina) foliolis quadrijugatis lanceolatis acutis. *Miller's Dict.* Le Sené. Regnault Bot. p. 388. Ic. opt.

Senna italica, sive foliis obtusis. *Bauh. l. c. Park. Theat. p.* 225.

Class Decandria. *Ord.* Monogynia. *Lin. Gen. Plant.* 514.

Ess. Gen. Ch. Cal. 5-phyllus. *Petala* 5. *Antheræ* supremæ 3 steriles; infimæ. 3 rostratæ. *Legumen.*

Sp. Ch. C. foliis sejugis subovatis, petiolis eglandulatis.

THE root is annual: the stalk is strong, smooth, branched, erect, and rises about two feet in height: the leaves stand in alternate order, and at their base are placed narrow pointed stipulæ: each leaf is composed of several pairs of oval or elliptical pointed nerved sessile pinnæ, of a yellowish green colour: the flowers are yellow, and produced successively in long axillary spikes: the calyx consists of five leafits, which are narrow, obtuse, concave, unequal, and deciduous: the corolla is composed of five petals, which are roundish, concave, entire, and of unequal size: the filaments are ten, of which the three undermost are longer than the others, and furnished with large beaked curved antheræ: the germen stands upon a short pedicle, and is long, compressed, and supplied with a short style, which is turned inwards, and terminated by an obtuse stigma: the seeds are brown, roundish, flat, and produced in a short compressed curved pod, divided by transverse partitions. The flowers appear in July and August.

Cassia Senna

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Senna is a native of Egypt: it also grows in some parts of Arabia, especially about Mocha; but as Alexandria has ever been the great mart from which it has been exported into Europe, it has long been distinguished by the name of Alexandrian Senna, or Sena.—Mons. Blondel, who was French Consul at several sea ports of the Levant, informs us, that the true Senna grows only in the woods of Ethiopia and in Arabia; for that the Senna, which was brought from Saide and Tripoli was carried there by the Caravans,[a] and the negative testimony of Alpinus, who in his Lib. de plantis Ægypti does not notice Senna, may seem to strengthen this opinion. But as Hasselquist found this plant growing spontaneously in upper Egypt,[b] the assertion of Mr. Blondel is not to be implicitly received.

The Senna italica, or blunt-leaved Senna, is a variety of the Alexandrian species, which by its cultivation in the south of France, (Provence) has been found to assume this change;[c] it is less purgative[d] than the pointed-leaved Senna, and is therefore to be given in larger doses; it was employed as a cathartic by Dr. Wright at Jamaica, where it grows on the sand banks near the sea.

Senna appears to have been cultivated in England in the time of Parkinson[f] (1640); and Miller tells us, that by keeping these

[a] Savary, *Dict. ii.* 1537.

[b] *Resa, p.* 532. Bergius says, " Senna sponte provenit in Ægypto superiori, & colliguntur folia a rusticis Arabibus, postquam semina matura produxit planta foliaque penitus fere exaruerunt. Hi Sennam vendunt principi (Schek) suo, qui illam Cairum mittit, emendam ab illo, in quem monopolium derivavit cohors Janizarorum. Hic vero Sennam postea vendit Europæis. Sic demum Senna Ægyptiaca, revera optima, ad officinas nostras migrat.' *M. M. p.* 338. See also Hasselquist, l. c.

[c] Vide Gouan's Letters to Salvador Soliva in *Dis. Sobre el Sen de Espanna.* Madrid. 1774.

[d] Coste and Willemet *Essais sur quelque plantes indigenes Medic.* a Nancy. p. 25.

[e] See *Lond. Med. Journ. vol.* 8.

[f] Vide *Park. Theat. p.* 225, *cited in Hort. Kew.*

plants in a hot bed all the summer, he frequently had them in flower, but adds, it is very rarely that they perfect their seeds in England.[g] There can be little doubt however but that some of the British possessions may be found well enough adapted to the growth of this vegetable, and that the patriotic views of the Society for encouraging Arts, &c. which has offered a reward to those who succeed in the attempt, will be ultimately accomplished.

The leaves of Senna, which are imported here for medicinal use, have a rather disagreeable smell, and a subacrid bitterish nauseous taste: they give out their virtue both to watery and spirituous menstrua, communicating to water and proof spirit a brownish colour, more or less deep according to the proportions; to rectified spirit a fine green.[h]

Senna, which is in common use as a purgative, was first known to the Arabian physicians, Serapion and Mesue; and the first of the Greeks by whom it is noticed is Actuarius, who does not mention the leaves, but speaks of the fruit. Mesue likewise seems to prefer the pod to the leaves, as being a more efficacious cathartic;[i] but the fact is contrary, for it purges less powerfully than the leaf, though it has the advantage of seldom griping the bowels, and of being without that nauseous bitterness which the leaves are known to possess.* How bitterness aids the operation of Senna is not easily to be understood; but it is observed by Dr. Cullen, that "when Senna was infused in the infusum amarum, a less quantity of the Senna was necessary for the dose than the simple infusions of it."[k] The same author has remarked, "that

[g] See *Dict.* [h] *Lewis, M. M.*

[i] Folliculo quam foliis est efficacior, præsertim si is ex viridi nigricat, modice amarus, subadstringit absolutus, recens, in quo semen amplum, compressum; vetustate enim exanimatur. *Mesue D. Simp. l. 2. c. 15. p. 65.*

* It has been an opinion generally received, that the footstalks of the leaves and twigs occasioned severe griping; but this Bergius denies, as in a number of instances he found their effects uniformly similar to those of the leaves. *L. c.*

[k] *M. M. v. ii. p. 521.*

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Cassia Fistula

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as Senna seldom operates without much griping, its frequent use is a proof how much most part of practitioners are guided by imitation and habit."[1] Senna however, when infused in a large proportion of water, as a dram of the leaves to four ounces of water, rarely occasions much pain of the bowels, and to those who do not object to the bulkiness of the dose, may be found to answer all the purposes of a common cathartic. For covering the taste of Senna, Dr. Cullen recommends coriander seeds; but for preventing its griping, he thinks the warmer aromatics, as cardamoms or ginger, would be more effectual. The formulæ given of the Senna by the Colleges, are those of an infusion, a powder, a tincture, and an electuary. Its dose in substance is from a scruple to a dram.

[1] *L. c. p.* 537.

The leaves of Colutea arborescens, (Common Bladder Senna) are purgative, and may be substituted for those of Senna, according to Bartholin. *Med. Dan. Domest. p.* 126. *Ed.* 4. This is the more worthy of notice, as it is usually cultivated for ornament in this country.

CASSIA FISTULA. PURGING CASSIA.

SYNONYMA. Cassia fistularis. *Pharm. Lond. & Edinb.* Cassia Fistula Alexandrina. *Bauh. Pin. p.* 403. *Raii Hist. p.* 1746. Commel. Hort. Amstel. t. 1 p. 215. tab. 110. Cassia Fistula. *Rumph. Herb. Amb. t.* 2. *p.* 83. *tab.* 21. Cassia Fistula Chaiarx-ambar vocata. *Alpinus de plant. Ægypti. p.* 3. *ic. p.* 7. Conna. *Hort. Malab. T. i. p.* 37. *tab* 21. Cassia solutiva. *Grac. Arom. l.* 1. *c.* 29. Tlái Xiem. *Flor. Cochin.*

Class Decandria. *Ord.* Monogynia. *Lin. Gen. Plant.* 514.

Ess. Gen. Ch. *Cal.* 5-phyllus. *Petala* 5. *Antheræ* supremæ 3 steriles; infimæ 3 rostratæ. *Legumen.*

Sp. Ch. C. foliis quinquejugis ovatis acuminatis glabris, petiolis eglandulatis.

THIS tree frequently rises forty feet in height, producing many spreading branches towards the top, and covered with brownish bark, intersected with many cracks and furrows: the leaves are pinnated, composed of four to six pairs of pinnæ, which are ovate, pointed, undulated, nerved, of a pale green colour, and stand upon shortish footstalks: the flowers are large, yellow, and placed in spikes upon long peduncles: the calyx consists of five oblong blunt greenish crenulated leaves: the corollæ is divided into five petals, which are unequal, spreading, and undulated: the filaments are ten; of these the three undermost are very long and curled inwards; the remaining seven exhibit only the large antheræ, which are all rostrated, or open at the end like a bird's beak: the germen is round, curved inwardly, without any apparent style, and terminated by a simple stigma: the fruit is a cylindrical pendulous pod, from one to two feet in length; at first soft and green, afterwards it becomes brown, and lastly black and shining, divided transversely into numerous cells, in each of which is contained a hard round compressed seed, surrounded with a black pulpy matter. The flowers appear in June and July.

This tree, which is a native of both the Indies, and of Egypt, was first cultivated in England by Mr. Philip Miller in 1731.[a] The pods of the East India Cassia are of less diameter, smoother, and afford a blacker, sweeter, and more grateful pulp than those which are brought from the West Indies, South America, or Egypt, and are universally preferred. In Egypt it is the practice to pluck the Cassia pods before they arrive at a state of maturity, and to place them in a house, from which the external air is excluded as much as possible: the pods are then laid in strata of half a foot in depth, between which palm leaves are interposed: the two following days the whole is sprinkled with water, in order to pro-

[a] Hort. Kew.

mote its fermentation; and the fruit is suffered to remain in this situation forty days, when it is sufficiently prepared for keeping.[b]

These pods, or canes, which are the heaviest, and in which the seeds do not rattle on being shaken, are commonly the best, and contain the most pulp, which is the part medicinally employed, and to be obtained in the manner described in the pharmacopœias.[c]

The best pulp is of a bright shining black colour, and of a sweet taste, with a slight degree of acidity. "It dissolves both in water and in rectified spirit; readily in the former, slowly and difficultly in the latter, and not totally in either: the part which remains undissolved appears to be of little or no activity."[d]

We are told by C. Bauhin, that some have supposed the Siliqua Ægyptiaca of Theophrastus to be our Cassia Fistula;[e] but there seems no evidence of its being known to the ancient Greeks; so that it is with more probability thought that the use of this, as well as of Senna, was first discovered by the Arabian physicians.[f]

The pulp of Cassia has been long used as a laxative medicine, and being gentle in its operation, and seldom occasioning griping or uneasiness of the bowels, has been thought well adapted to children, and to delicate or pregnant women. Adults, however, find it of little effect, unless taken in a very large dose, as an ounce or more, and therefore to them this pulp is rarely given alone, but usually conjoined with some of the brisker purgatives. It has been observed by Vallisnieri, that its purgative quality is remarkably promoted by manna; but this effect was never discovered in the trials made by Dr. Cullen, in whose opinion the Cassia pulp is much of the same nature as the fructus acido dulces; and he says, "it would certainly be proper for our country

[b] Vide Hasselquist and Alpinus.

[c] See Pulparum extractio. [d] Lewis, M. M. p. 207.

[e] Siliquam Ægyptiacam Theophrasti (1 hist. 18.) nonnulli censent. *Pinax. p.* 403.

[f] Therefore to be considered the Eiarxamber of Serapion, and the Chaiarlander of Avicenna, from whom Actuarius seems to have his Κασσια μελαινα.

apothecaries to know that the pulp of prunes might be employed in the place of the more expensive and precarious Cassia."[g]

By the use of Cassia, it has been remarked, that the urine becomes of a green or blackish colour;[h] but Bergius relates, that a young man took an ounce three successive mornings without producing the least change in the colour of his urine.[i]

The officinal preparation of this drug is the electuarium e cassia: it is also an ingredient in the electuarium e senna, or e. lenitivum.

[g] *M. M. vol. ii. p.* 506.

[h] By Sennertus, Lösecke, Boerhaave, Lewis, &c.

[i] M. M. p. 341. Gmelin also denies this effect of Cassia. *Diss. de Rhab. p.* 30.

TAMARINDUS INDICA. TAMARIND TREE.

SYNONYMA. Tamarindus. *Pharm. Lond. & Edinb. Gerard Emac. p.* 1607. *Park. Theat. p.* 217. *Pluck. tab.* 64. *fig.* 4. *Rumph. Herb. Amb. p.* 90. *tab.* 23. Siliqua arabica, quæ Tamarindus. *Bauh. Pin. p.* 403. Balam Pulli. *Hort. Malab. tom. i. p.* 39. *tab.* 23. Tamarindus indica. *Jacquin, Pl. Americ. p.* 10. *tab.* 10. *ed.* 2. *pict. p.* 11. *t.* 13. Conf. *Sloane's Jamaica, vol. ii. p.* 45. *Browne's Jamaica, p.* 125. *Hughes's Barbad. p.* 189. *Long's Jamaica, vol. iii. p.* 729. *Swartz. Obs. Botan. p.* 25. *Cáy Me.* Flor. Cochin. p. 403.

Class Monadelphia. *Ord.* Triandria. *Schreb. Gen. Plant. p.* 450.

Ess. Gen. Ch. Cal. 4-partitus. *Petala* 3. *Nectarium* setis 2 brevibus sub filamentis. *Legumen* pulposum.

THIS tree rises to a great height, sending off numerous large branches, which spread to a considerable extent, and have a beautiful appearance: the trunk is erect, thick, and covered with rough bark of a greyish or ash-colour: the leaves are pinnated,

Tamarindus indica

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alternate, consisting of several parts (about 14) of small pinnæ, which are opposite, oblong, obtuse, entire, smooth, of a yellowish green colour, and stand upon very short footstalks: the flowers approach to the papilionaceous kind, and are produced in racemi or lateral clusters: the calyx consists of four deciduous leaves, which are patent or reflexed, oblong, or rather ovate, entire, smooth, nearly equal in size, and straw-coloured or yellowish: the petals are three, ovate, concave, acute, indented, and plaited at the edges, about the length of the calyx, and of a yellowish colour, beautifully variegated with red veins: the peduncles are about half an inch long, and each furnished with a joint, at which the flower turns inwards: the filaments are commonly three, but in some flowers we have found four, in others only two; they are purple, united at the base, and furnished with incumbent brownish antheræ: the germen is oblong, compressed, incurved, standing upon a short pedicle: the style is tapering, somewhat longer than the filaments, and terminated by an obtuse stigma: the fruit is a pod of a roundish compressed form, from three to five inches long, containing two, three, or four flattish angular shining seeds, lodged in a dark pulpy matter, and covered by several rough longitudinal fibres. The flowers, according to Jacquin, appear in October and November.

The generic character of Tamarindus is wholly founded upon this species, as no other of the same family has hitherto been discovered.[a] Though Linnæus in his last edition of the Genera plantarum has followed Jacquin's description of the Tamarindus, in observing that the filaments are united at the base, a circumstance which ought to have placed it in the class Monadelphia, yet notwithstanding this, they neither thought proper to remove it from the class Triandria, where it also has been since retained in Murray's edition of the System Vegetabilium; and is consequently thus classed by us in the systematic arrangement prefixed

[a] Considerable difference in the shape of the pod and sweetness of the pulp has been observed; but this variety depends upon the locality of the tree.

to the first volume in the first edition of this work. Since that time however, we have had an opportunity of examining the recent flower of the Tamarind, from which we have no doubt of its having the true character of the monadelphia class, in which we have now placed it, and for which we have lately had the authority of Schreber,‖ and that of De Loureiro.†

This tree, which appears upon various authorities, to be a native of both Indies,[b] America, Egypt, and Arabia, was cultivated in Britain previous to the year 1633; for in Johnson's edition of Gerard we are told, that the figure of the Tamarind "*is of a plant some six months old, arisen of a seed: and such by sowing of seeds I have seene growing in the garden of my deceased friend Mr. Tuggy.*"[c] Miller informs us, that Tamarind plants, "if rightly managed, will grow very fast;" adding, "for I have had them upwards of three feet high in one summer, from seed, and have had two plants, which produced flowers the same season they were sown; but this was accidental, for none of the older plants have produced any flowers, although I have several plants of different ages, some of which are sixteen or eighteen years old, and about twelve feet high, with large spreading tops."[d] To this it may be added, that a healthy tree of this species, now in the Royal Botanic Garden at Kew, much larger and older than those mentioned by Miller, has not been known to flower for several years before the present summer; this fortunately enables us to publish a perfect specimen of it represented by the annexed plate, which will be

‖ V. Genera plant. Class Monadelph. Ord. Triand. p. 450.

† He says, A Classe Triandria ad Monadelphiam transtuli hoc genus non solum propriâ observatione fretus, sed etiam ab ipso Linnæo monitus filamenta habere infernè connata. *Flor. Cochin. p.* 403.

In order to make this more evident, we have displayed the filaments as they appeared in our specimen. The rudiments of other filaments probably constituted that part of the generic character which has not been noticed in our description.

[b] Sir Hans Sloane however says, "these trees were strangers in the West Indies, and planted first at Acapulco." *L. c.* [c] *L. c. p.* 1608. [d] See *Dict.*

found to correct the figure of the Tamarind, given by the justly celebrated botanist Jacquin.

The pulp of the Tamarind, with the seeds, connected together by numerous tough strings or fibres, are brought to us freed from the outer shell, and commonly preserved in syrup. According to Long, Tamarinds are prepared for exportation at Jamaica, in the following manner. "The fruit or pods are gathered (in June, July, and August) when full ripe, which is known by their fragility or easy breaking on small pressure between the finger and thumb. The fruit, taken out of the pod, and cleared from the shelly fragments, is placed in layers in a cask, and boiling syrup, just before it begins to granulate, is poured in, till the cask is filled: the syrup pervades every part quite down to the bottom, and when cool the cask is headed for sale."[e] He observes, that the better mode of preserving this fruit is with sugar, well clarified with eggs, till a transparent syrup is formed, which gives the fruit a much pleasanter flavour: but as a principal medicinal purpose of the pulp depends upon its acidity, which is thus counteracted by the admixture of sugar, it would therefore be of more utility if always imported here in the pods.[f] The fruit produced in the East Indies is more esteemed than that of the West, and easily to be distinguished by the greater length of the pods, and the pulp being dryer, and of a darker colour.

This fruit, the use of which was first learned of the Arabians, contains a larger proportion of acid, with the saccharine matter, than is usually found in the *fructus acido-dulces*, and is therefore not only employed as a laxative, but also for abating thirst and heat in various inflammatory complaints, and for correcting putrid disorders, especially those of a bilious kind; in which the cathartic, antiseptic, and refrigerant qualities of the fruit have been found equally useful. When intended merely as a laxative it may be of advantage to join it with manna, or purgatives of a sweet kind, by which its use is rendered safer and more effectual. Three

[e] *L. c.* [f] *Cullen, M. M. vol. ii. p.* 507.

drams of the pulp are usually sufficient to open the body; but to prove moderately cathartic, one or two ounces are required. It is an ingredient in electuarium e cassia, and el. e senna, or lenitive electuary.

"Tournefort relates, that an essential salt may be obtained from Tamarinds, by dissolving the pulp in water, and setting the filtered solution, with some oil upon the surface, in a cellar for several months; that the salt is of a sourish taste, and difficultly dissoluble in water; and that a like salt is sometimes found also naturally concreted on the branches of the tree. The salt, as Beaumé observes, may be obtained more expeditiously, by clarifying the decoction of the Tamarinds with whites of eggs, then filtering it, and evaporating it to a proper consistence, and setting it to cool: the salt shoots into crystals of a brown colour, and very acid taste; but in dissolving and crystallizing them again, or barely washing them with water, they lose almost all their acidity, the acid principle of the Tamarinds seeming not to be truly crystallizable." Vide *Lewis, M. M. p.* 633.

POLYGALA SENEGA. RATTLESNAKE-ROOT MILK WORT.

SYNONYMA. Seneka. *Pharm. Lond. & Edinb.* Polygala marilandica, caule non ramoso, spica in fastigio singulari gracili e flosculis albis composita. *Raii App. vel. Hist. tom. iii. p.* 670. Polygala caule simplici erecto, foliis ovato-lanceolatis alternis integerrimis, racemo terminali erecto. *Gron. Flor. Virgin. i. p.* 80. Polygala Senega. *Amæn Acad. Tom. iii. p.* 124. *Miller's Dict. Fig. Ed.* 7. Senegau. *Trew. Comm. Litt. Nor.* 1741. *Tab.* 4.

Class Diadelphia. *Ord.* Octandria. *Lin. Gen. Plant.* 851.

Ess. Gen. Ch. *Cal.* 5-phyllus: foliolis alæformibus, coloratis. *Legumen* obcordatum, biloculare.

Sp. Ch. P. floribus imberbibus spicatis, caule erecto herbaceo simplicissimo, foliis lato-lanceolatis.

Polygala Senega

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THE root is perennial, woody, branched, contorted, about the thickness of a finger, and covered with ash-coloured bark: it sends up several stems, which are simple, erect, slender, round, smooth, of a dark reddish colour, and rise nearly a foot in height: the leaves are oblong, or lance-shaped, acutely pointed, of a pale green colour, and stand alternately upon short footstalks: the flowers appear in June, they are white, of the papilionaceous kind, and grow in a close terminal spike: the calyx is divided into three narrow persistent segments, two of which are placed beneath and one above the corolla: the corolla is composed of two exterior petals, or *wings,* which are flat, and of an oval shape; a short tubular *standard,* undivided at the mouth; and a flattened *keel* distended towards the end, from whence proceeds a pencil-shaped appendage: the filaments are eight, united at the base into two portions, and supplied with simple antheræ: the germen is oblong, and supports a simple erect style, furnished with a cloven stigma: the capsule is inversely heart-shaped, and contains several small oblong seeds.

This plant is a native of Virginia, and other parts of North America. It was first cultivated in England in 1759, by Mr. P. Miller,[a] who has published a figure of it, which will be found to accord very accurately with the icon here annexed, which was drawn from the plant now in flower at the Royal garden at Kew. "This root, of no remarkable smell, has a peculiar kind of subtile pungent penetrating taste.[b] Its virtue is extracted both by water and spirit, though the powder in substance is supposed to be more effectual than either the decoction or tincture. The watery decoction, on first tasting, seems not unpleasant, but the peculiar pungency of the root quickly discovers itself, spreading through the fauces, or exciting a copious discharge of saliva, and frequently, as Linnæus observes, a short cough: those to whom I

[a] *Dict. Ed.* 7. *n.* 5. *See Hort. Kew.*

[b] Bergius says, "Sapor primum calidiusculus, deinde acidulus in faucibus sentitur cum specie acrimoniæ, inhærens cum siccitate." M. M. p. 596.

have directed this medicine, have generally found a little Madeira most effectual for removing its taste from the mouth, and making it sit easy on the stomach. A tincture of the root, in rectified spirit, is of more fiery pungency, extremely durable in the mouth and throat, and apt to promote vomiting or reaching."[c] Rattle-snake-root was first introduced to the attention of physicians about sixty years ago, by Dr. John Tennent,[d] whose intercourse with the Indian nations led him to discover that they possessed a specific medicine against the poison of the rattlesnake,‖ which, in consequence of a suitable reward, was revealed to him, and found to be the root of this plant, which the Indians employed both internally and externally.[e] Cases afterwards occured, by which he was fully convinced of the efficacy of this medicine from his own experience. And as the Doctor observed, that pleuretic or peripneumonic symptoms† were generally produced by the action of this poison, he hence inferred, that the Rattlesnake-root might also be an useful remedy in diseases of this kind. It was accordingly tried in pleurisies not only by Tennent himself,[f] but by several of the French academicians and others,[g] who all unite in testimony of its good effects. However, in many of these cases, recourse was had to the lancet, and even the warmest advocates for the Seneka say, that in the true pleurisy repeated bleeding is at the same time

[c] Lewis, *M. M. p.* 518. [d] See his *Physical Disquisitions, P. 2. Lond.* 1735.

‖ A fortiori, it is presumed to cure the poisonous effects of other serpents, as being less virulent. Testatur exemplum ancillæ Suecicæ, quæ alvi de¸iendæ causa ruri pone fruticem secedens a serpente quodam (Colubro Bero sine lubio) et in mulieribus ipsis vulnerabatur sub gravissimorum sypmtomatum satellitio, sed duabus unice dosibus ab ill. a Linné subministratis convaluit. *Amæn. Acad. vol. vi. p.* 214.

[e] Chewed and applied to the wound, or in the form of a cataplasm.

† As difficulty of breathing, cough, hæmoptysis, a strong quick pulse, &c.

[f] See his *Ess. on the Pleurisy. Philad.* 1736. Also his *Epistle to Dr. Mead.*

[g] Lemery, De Jessieu, Du Hamel, Bouuvart, for which see *Mem. de l'Acad. de Paris*, 1739, & 1744.

Hæmatoxylum Campechianum

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not to be neglected. The repute which this root obtained in peripneumonic affections, induced some to employ it in other inflammatory disorders, in which it proved serviceable, particularly in rheumatism.[h] It has also been prescribed with much success in dropsies,[i] and this we can the more easily credit from its effects in increasing the different secretions, for it is remarked that it produces a plentiful spitting, increases perspiration and urine, and frequently purges or vomits. It is likewise reported to be a medicine of great power, in rendering the siziness of the blood more fluid; De Haen however brings a strong fact to contradict this opinion.[k] The usual dose is from one scruple to two of the powder, or two or three spoonfuls of a decoction, prepared by boiling an ounce of the root in a pint and a half of water till it is reduced to one pint.

[h] *Comm. Noric.* 1741. *p.* 362. Sarcone *Geschichte d. Krankh. in Neapel, tom. i. p.* 108, 169, 173, 199. And Dr. Cullen says, "We have had some instances of its being useful, especially where it operated by producing sweat." *M. M. vol. ii. p.* 533.

[i] Bouvart. l. c. Mackenzie, *Med. Obs. & Inq. vol. ii. p.* 288. See also Percival, *Essays, vol. ii.* 178.

[k] *Ratio Medend. P.* 4. *p.* 252.

HÆMATOXYLUM CAMPECHIANUM. LOGWOOD.

SYNONYMA. Lignum Campechense. Pharm. Lond. & Edinb. Hæmatoxylum spinosum, foliis pinnatis, racemis terminalibus. *Browne's Jam.* 221. Lignum Campechianum, species quædam Brasil. Vide *Sloane's Jam.* vol. 2. p. 183. Crista pavonis Coronillæ folio secunda, sive tinctoria Indica, flore luteo racemoso minore, siliqua latissima glabra, lignum rubrum, *Sappan* dictum ferens. *Breyn. Prodr.* 2. 37. Erythroxylum, sive

lignum rubrum Indicum spinosissimum, coluteæ foliis, floribus luteis, siliquis maximis. *Herm. Par. Bat.* 333. Hæmatoxylum. *Long's Jam.* vol. 3. p. 754. *Miller's Dict. Jacquin, Ob. Bot.* 1. p. 20.

Class Decandria. *Order* Monogynia. *L. Gen. Plant.* 525.

Ess. Gen. Ch. Cal. 5-partitus. *Petala* 5. *Caps.* lanceolata, 1-locularis, 2-valvis: valvis navicularibus.

THE Campechianum is the only species of the Hæmatoxylum hitherto discovered; it is a much smaller tree than the Guaiacum, and both the trunk and the branches are extremely crooked, and covered with dark-coloured rough bark; the smaller ramifications are numerous, close, prickly, or beset with strong sharp spines; the leaves are pinnated, generally composed of four or five pair of pinnæ, of an irregular oval shape, obliquely nerved, and obtusely situated at the top; the flowers grow in racemi, or in close regular terminal spikes, and appear in March; the calyx divides into five oblong obtuse segments, of a brownish purple colour; the petals are five, patent, obtusely lance-shaped, and of a reddish yellow colour; the stamina are somewhat hairy, tapering, of unequal length, shorter than the corolla, and the antheræ are small and oval; the style is nearly the length of the stamina, and the germen becomes a long double valved pod, which contains many oblong compressed, or somewhat kidney-shaped seeds.

This tree is a native of South America, and grows to the highest perfection at Campeachy, in the Bay of Honduras, whence the seeds were brought to Jamaica, in 1715, with a view of propagating it as an article of commercial export. And though it does not appear to have answered this purpose so fully as could have been wished, yet we are told that in some parts of the island, especially where the ground is swampy, this tree, in the course of three years, will rise to the height of ten feet, and by this quick and luxuriant growth, soon overrun and destroy the neighbouring

plants[a] The Logwood tree was first cultivated in Britain by Mr. P. Miller in 1739,[b] who says, "there are some of these plants now in England which are upwards of six feet high, and as thriving as those in their native soil;"[c] but this observation will not apply to the present time, for we have searched in vain for this plant through most of the principal garden stoves in the neighbourhood of London.

The wood of this tree is of a solid texture, and of a dark red colour; it is imported into Europe principally as a dying drug, cut into junks or logs of about three feet in length; of these pieces, the largest and thickest are preferred, as being of the deepest colour. This wood has a sweetish subastringent taste, and no remarkable smell; it gives a purplish red tincture both to watery and spirituous infusions, and tinges the stools, and sometimes the urine, of the same colour; but from the experiments of Du Hamel and others, it does not appear to colour the bones of animals, as observed of madder and some other plants of that class. It is used medicinally as an astringent and corroborant. In diarrhœas it has been found peculiarly efficacious, and has the recommendation of some of the first medical authorities:[d] also in the latter stages of dysentery, when the obstructing causes are removed, to obviate that extreme laxity of the intestines usually superinduced by the repeated dejections. Extractum ligni campechensis is ordered in the pharmacopœias, and may be given in the dose of one scruple or two, repeated according to the urgency of the symptoms.

[a] In some parts of Jamaica "are such quantities of it growing wild, as to incommode the land-holders extremely." Long's l. c. 754. He also observes, that "it makes an excellent and beautiful fence, which, if kept properly trimmed, grows so strong and thick, that nothing can break through."

[b] Hort. Kew. [c] Dictionary abridged, sixth edition. [d] Baker, Clark, Pringle, Duncan, Zimmerman, Baldinger, and others.

FUMARIA OFFICINALIS. COMMON FUMITORY.

SYNONYMA. Fumaria. *Pharm. Edinb.* Fumaria officinarum et Dioscoridis. *Bauh. Pin. p.* 143. Fumaria purpurea. *Gerard. Emac. p.* 1088. Fumaria vulgaris. *Park. Theat. p.* 287. *Raii Hist. p.* 405. *Synop. p.* 284. Fumaria foliis multifidis lobis subrotunde lanceolatis; fructibus monospermis. *Hal. Stirp. Helv. n.* 346. *Hudson Flor. Ang. p.* 270. *Lightfoot Flor. Scot. p.* 379. *Curtis Flor. Lond. n.* 112. *Withering. Bot. Arrang. p.* 751.

Class Diadelphia. *Ord.* Hexandria. *Lin. Gen. Plant.* 849.

Ess. Gen. Ch. *Cal.* dyphyllus. *Cor.* ringens. *Filamenta* 2. membranacea, singula *Antheris* 3.

Sp. Ch. F. pericarpiis monospermis racemosis, caule diffuso.

THE root is annual, slender, and fibrous: the stalk is spreading, smooth, somewhat angular, bending, much branched, and usually rises above a foot in height: the leaves are compound, doubly pinnated, pinnulæ trilobed, of a pale green colour, and standing upon slender footstalks: the flowers are of a reddish purple colour, and grow in spikes, which arise from the axillæ of the leaves: the bracteæ are linear, purplish, and placed at the base of the peduncles: the calyx is composed of two deciduous equal leafits, slightly indented at the edges: the corolla is oblong, tubular, gaping, or ringent, the palate projecting so as to fill up the mouth; the *upper lip* dilated at the tip, keel-shaped, hollow beneath, turned a little upwards at the margin, and at the base obtuse, and curled inward; the *lower lip* is nearly similar to the upper; the *lateral petals* cohere at the top, and form a quadrangular mouth, in which there are three divisions on the upper and lower part: the filaments are two, membranous, broad at the base, and each furnished with

Fumaria officinalis

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three yellowish antheræ: the germen is oval: the style is filiform, about the length of the filaments, and crowned with a flattish downy stigma: the seed is roundish, and contained in a small heart-shaped pod. Fumitory is common in corn fields, and usually flowers in May.

By the Ancients this plant was named Capnos,[a] from being thought to be peculiarly useful in dimness of sight, and other diseases of the eyes. The leaves, which are the part of the plant directed for medicinal use by the Edinburgh College, are extremely succulent, and have no remarkable smell, but a bitter somewhat saline taste. "The expressed juice, and a decoction of the leaves in water, inspissated to the consistence of extracts, are very bitter, and considerably saline; on standing for some time they throw up to the surface copious saline efflorescences, in figure somewhat resembling the crystals of nitre, to the taste bitterish and slightly pungent. A tincture of the dry leaves, in rectified spirit, yields, on inspissation, an extract less in quantity and bitterer in taste than either the watery extract or inspissated juice."[b] Fumitory has been supposed by several Physicians of great authority,[c] both ancient and modern, to be very efficacious in opening obstructions and infarctions of the viscera, particularly those of the hepatic system: it is also highly commended for its power of correcting a scorbutic and acrimonious state of the fluids; and has therefore been employed in various cutaneous diseases; when taken in pretty large doses it proves diuretic and laxative, especially the juice, which may be mixed with whey, and used as

[a] Καπνος Dioscor. Καπνιος Gal. i. e. fumus—"Claritatem facit inunctis oculis, delachrymationemque, ceu fumus; unde nomen." *Plin. L. 25. cap. 13.* See also Galen. Simp. *Lib. 7. p. 49.*

[b] *Lewis M. M. p. 315.*

[c] Aetius, Boerhaave, F. Hoffman, and many others.

The juice of Dandelion and Fumitory is greatly commended by Leidenfrost in obstinate diseases of the skin. See *Diss. de succis herb. &c.*

An infusion of the leaves is used as a cosmetic to remove freckles and clear the skin.

a common drink. Dr. Cullen classes this plant among the tonics; he says, "it is omitted in the London dispensatory, but retained in ours, and in every other that I know of. I have found it useful in many cases in which bitters are prescribed; but its remarkable virtues are those of clearing the skin of many disorders. For this it has been much commended; and I have myself experienced its good effects in many instances of cutaneous affections, which I would call Lepra. I have commonly used it by expressing the juice, and giving that to two ounces twice a day: but I find the virtues remain in the dried plant, so that they may be extracted by infusion or decoction in water; and the foreign dispensatories have prepared an extract of it, to which they ascribe all the virtues of the fresh plant." [d]

[d] *M. M. vol. ii. p. 77.*

Aconitum Napellus

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ORD. XXVI. MULTISILIQUÆ.

(From *Multus*, many, and *Siliqua*, a Pod.)

Plants which have more seed vessels than one.

ACONITUM NAPELLUS. COMMON WOLF's-BANE, Or MONK's HOOD.

SYNONYMA. *Aconitum, Pharm. Lond. & Edinb.* *Stoerck tab.* 3. *Aconitum* cæruleum seu Napellus, *Bauh. Pin.* 183. *Aconitum* caule simplici, spica densa, petiolis unifloris, casside breviter mucronata, *Hal. Stirp. Helv.* No. 1197, *vires autem,* No. 1198. *Aconitum* verus cæruleus, *Gerard.* *Aconitum, Spec.* 1, *Raii. Napellus, Matth. Camerar. Dodon. &c.*

Class Polyandria. *Order* Trigynia. L. *Gen. Plant.* 682.

Ess. Gen. Ch. *Cal.* 0. *Petala* 5: supremo fornicato. *Nectaria* 2, pedunculata, recurva. *Siliquæ,* 3 s. 5.

Sp. Ch. A. foliorum laciniis linearibus superne latioribus linea exaratis.

THE root is perennial, turnip-shaped, or more commonly fusiform; the stalk is simple, erect, strong, beset with many leaves, and grows from two to five feet high: the leaves are lobed, deeply laciniated, and stand alternately upon long footstalks, but the upper leaves are almost sessile, and the laciniæ much broader

than those towards the bottom of the stem; the superior pagina of the leaf is of a dark green colour, but the under pagina is whitish; the peduncles are generally unifloral, erect, and villous; the flowers terminate the stalk, are without calyces, and grow in a long racemus or spike; each flower consists of five petals, which include two nectaries, the uppermost petal is arched over the lateral ones, so as to appear helmet-shaped, or hooded; they are all of a purplish or deep violet colour: the pistilla, (according to Jacquin) are three, four, and sometimes five. The Aconitum is a native of the mountainous and woody parts of Germany, France, and Switzerland; but since the time of Gerard, it has been cultivated for ornament in most of the flower-gardens in this country.

The figure of this plant given by Stoerck, is supposed, by Haller and Bergius to be the Aconitum Cammarum of Linnæus: Murray, however, is of a different opinion; and upon comparing Stoerck's Aconitum with the Cammarum and Napellus, as delineated by Jacquin, (Flor. Aust.) we have no hesitation in referring it to the latter.*

Every part of the fresh plant is strongly poisonous, but the root is unquestionably the most powerful, and when first chewed imparts a slight sensation of acrimony, but afterwards, an insensibility, or stupor at the apex of the tongue, and a pungent heat of the lips, gums, palate, and fauces, are perceived, followed with a general tremor and sensation of chilliness. Though the plant loses much of its power by drying, yet Stoerck observes that, when powdered and put upon the tongue, it excites a durable sense of heat, and sharp wandering [a] pains, but without redness or inflammation. The juice applied to a wound, seemed to affect the

* In the Cammarum the top of the flower rises much higher, and forms a more acute angle; the flowers are of a fainter blue colour, and the racemus is always shorter than that of the Napellus.

[a] Reinhold, however, describes the leaves of this plant, when dry, as almost insipid. Diss. de Aconit. Napello.

whole nervous system;[b] even by keeping it long in the hand, or on the bosom, we are told unpleasant symptoms have been produced.[c] That the ancients considered the Aconitum to be the most destructive of vegetable productions, appears from their fanciful derivation of its origin: "ut ab Hecate inventum aut ex Cerberi "spuma enatum pronunciarent;" and Ray says, "Napellus ve- "nenorum praesentaneorum facilè princeps."[d] The deleterious effects of this plant, like those of most vegetable poisons, are produced by its immediate action upon the nervous energy; for of the different animals[e] which have been destroyed by it, we find but one instance, wherein upon dissection, marks of organic disease[f] were discovered, and this, as well as those mentioned respecting the Belladonna, we attribute to the action of secondary causes.

The fatal symptoms brought on by this poison, are thus stated by Haller: "Intus adsumtus Napellus vomitum movet, convul- "siones, rigorem, vertiginem, maniam, hypercatharses, sursum

[b] The juice was applied to a wound of the finger, which not only produced pains in the hand and arm, but cardialgia, great anxiety, a sense of suffocation, syncope, &c. and the wounded part sphacelated before it came to suppuration. Rödder in Alberti Jurisp. Med. t. 6. p. 724.

[c] If this be admitted, it must be referred to a peculiar idiosyncrasy of the body rather than to the power of the plant. Murray, Apparat. Med. vol. 3. p. 12.

[d] Ray observes that the Napellus loses much of its virulency by being transplanted from the mountains into our gardens; and this observation has been confirmed by the experiment of D. Martinus Bernhardus a Berniz, in Ephem. Germ. ann. 2. Observ. 22. (Ray, Hist. Plant. p. 702.) and for farther confirmation see Pet. Joh. Faber in Pauth. l. 1. cap. 43.

[e] The root of the Napellus is an immediate poison to almost all animals, but actual experiments with it have been made upon wolves, cats, dogs, mice, &c. See Wepfer, Hist. de Cicut. p. 176. de Napello. Phil. Transact. vol. 27. p. 488. Sprögel Diss. Exper. circa venena, p. 6. Hallefeld, p. 23. Ehrhart, vide Reinhold, Diss. cit. Cows and Goats, by being forced to eat this plant, perished. Moraeus Fil. in K. Vet. Acad. Handl. 1745. p. 217.

[f] This was a wolf, wherein marks of inflammation of the stomach were discovered. Wepfer, l. c. p. 180.

" & deorsum erumpentes, tum ventris tumores, & alia gravissima " symptomata, sudorem frigidum, asphyxiam."[g] Stoerck appears to be the first who gave the Wolf's-bane internally, as a medicine; and since his experiments were published, in 1702, it has been generally and often successfully employed in Germany, and the northern parts of Europe, particularly as a remedy for obstinate rheumatisms: and many cases are related where this disease was of several years duration, and had withstood the efficacy of other powerful medicines, as mercury, opium, antimony, cicuta, &c. yet, in a short time, were entirely cured by the Aconitum.[h] Instances are also given us of its good effects in gout, scrophulous swellings, venereal nodes, amaurosis, intermittent fevers, &c.[i] Bergius describes its *Virtus* to be pellens, sudorifera, diuretica, subvertiginosa; *recens* venenata: *Usus,* rheumatismus, arthritis, malum ischiadicum.

[g] N. 1198. l. c. These symptoms are collected from a number of fatal instances of its poisonous effects, some of which we shall mention. The root was given by way of experiment to four condemned criminals, two at Rome, in the year 1524, and two at Prague, in 1561, of whom two soon perished, the other two, with great difficulty, recovered. Matthiol. in Dioscorid. p. 768. It has frequently been eaten by mistake for other plants, and proved fatal. Willis de Anima brutor. p. 289. Dodon. Stirp. Pempt. L. 4. p. 442. Bacon, Philos. Trans. vol. 38. p. 284. And the following remarkable fact is said to have happened at Sweden:—A person having eaten some of the fresh leaves of the Napellus, became maniacal, and the surgeon who was called to his assistance declared, that the plant was not the cause of the disorder; and, to convince the company that it was perfectly innocent, he eat freely of its leaves; but he suffered by his temerity, for soon after he died in great agony. Moraeus, l. c. 1739. p. 41.

[h] Stoerck libell. de stramon, &c. Contin. Exper. Libell. de Pulsatill. Nig. p. 58. Rosenstein, Hall Epist. vol. 5. p. 174. Collin Observ. pars. 2. Blom Vet. Acad. Handl. 1773. p. 258. Odhelius, ibid. 1776. p. 68. Hast, Med. Virkets tilstand, p. 307. Ribe, vide Reinhold Diss. p. 37. Comment. de rebus, vol. 2. p. 240. Diss. de usu salutari Extr. Acon. in Arthritide pres. Böhmer Hal. 1768. a pag 10 ad 13. Aug. Phil. Gesner. Beobacht a. d. Arzn. vol. 1. p. 196. Tode, Med. chir. Bib. vol. 2. P. 1. p. 120. Tritze Mediz. Annalen, vol. 1. p. 327. Stöller, Beob. u. Erf. p. 146. Stoll Rat. Medend. P. 3. p. 167.

[i] See the authors referred to above.

Dictamnus albus

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This plant has been generally prepared as an extract or inspissated juice, after the manner directed in the Edinburgh and many of the foreign pharmacopœias,[k] and like all virulent medicines, it should be first administered in small doses. Stoerck recommends two grains of the extract to be rubbed into a powder, with two drams of sugar, and to begin with ten grains of this powder two or three times a day. We find however, that the extract is often given from one grain to ten for a dose, and Stoll, Schenckbecher, and others, increased this quantity very considerably. Instead of the extract, a tincture has been made of the dried leaves, macerated in six times their weight of spirits of wine, and forty drops given for a dose.

[k] Its efficacy is much diminished on being long kept.

DICTAMNUS ALBUS. WHITE FRAXINELLA, Or, BASTARD DITTANY.

SYNONYMA. Dictamnus albus. *Pharm. Edinb.* Dictamnus albus sive Fraxinella. *Bauh. Pin. p.* 222. Fraxinella. *Gerard Emac. p.* 1245. *Morris, Hist. iii. p.* 456. *Tourn. Inst. p.* 430. Fraxinella flore purpureo & albo. *Park. Parad. p.* 333. Fraxinella, &c. *Raii Hist. p.* 698. *J. Bauh. iii. p.* 494. *Hal. Stirp. Helv. n.* 1029. *Miller's Figures, tab.* 123. *Jacquin, Flor. Aust. tab.* 428. α Flore niveo. β Flore rubro.

Class Decandria. *Ord.* Monogynia. *Lin. Gen. Plant.* 522.

Ess. Gen. Ch. *Cal.* 5-phyllus. *Petala* 5, patula. *Filamenta* punctis glandulosis adspersa. *Caps.* 5, coalitæ.

Sp. Ch. C. foliis pinnatis caule simplici. *Supp. p.* 232.

THE root is perennial, and sends off many long spreading fibres: the leaves are pinnated and large; pinnæ elliptical, veined, pointed, slightly serrated, stand in pairs, and are terminated by an odd one, which is the largest: the stalk is round, smooth, erect, and rises about a foot and a half in height: the bracteæ are stipular, and placed singly at the base of the peduncles: the flowers appear from May till July; they are numerous, large, white, terminate the stem, and stand alternately upon long peduncles, which towards the top are bent downwards, and beset with small glands; the corolla is composed of five white petals, of an obversely oval shape, and inserted into the calyx by long claws: the calyx is rough, and divided into five short segments: the filaments are ten, about the length of the corolla, marked with minute glands, and furnished with large antheræ: the germen is pentangular: the style short, tapering, and supplied with a pointed stigma: the seed vessels are five united capsules, each of which contains two small oval seeds.

This plant, which is commonly called Fraxinella,* is a native of France, Germany, and Italy. It was cultivated here by Gerard, and frequently adorns the borders of our flower gardens, especially the red variety, which is the handsomer plant. It emits a fragrant bituminous odour, which seems to be the essential oil of the herb, secreted by numerous small glands, with which the peduncles and filaments are abundantly furnished. These odorous effluvia are so very inflammable, that on the application of flame, they take fire, especially on the evening of a hot dry day.[a]

The root, which is the part directed for medicinal use, "when fresh, has a moderately strong, not disagreeable smell, but as met with in the shops it has scarcely any. To the taste it discovers a pretty strong and very durable bitterness, which is taken up both by watery and spirituous menstrua, and on inspissating the filtered

* From the resemblance its leaves have to those of the ash.

[a] Vide Du Hamel, *Phys. des arbres, tom. i. p.* 150. Nollet, *Cours. de Phys. vol. i. p.* 300.

tinctures, remains entire in the extracts: the aqueous extract is in much larger quantity than the spirituous, and proportionably weaker in taste."[b]

Formerly this root was used as a stomachic, tonic, and alexipharmic, and was supposed to be a medicine of much efficacy in removing uterine obstructions, and destroying worms;[c] but its medicinal powers became so little regarded by modern physicians, that it had fallen almost entirely into disuse, till Baron Stoerck brought it into notice by publishing several cases of its success,[d] viz. in tertian intermittents, worms, (lumbrici) and menstrual suppressions. In all these cases he employed the powdered root to the extent of a scruple twice a day. He also made use of a tincture, prepared of two ounces of the fresh root digested in fourteen ounces of spirit of wine; of this twenty to fifty drops, two or three times a day, were successfully prescribed in epilepsies, &c. and when joined with steel, this root, we are told, was of great service to chlorotic patients.

The Dictamnus undoubtedly is a medicine of considerable power; but, notwithstanding the account of it given by Stoerck, who seems to have paid little attention to its modus operandi, we may still say with Haller, "Nodum autem vires pro dignitate exploratus est." l. c.

[b] *Lewis, M. M. p. 274.*

[c] See Geier, *Dictamnographia. Buchner Diss. de Fraxinella.* Matthiolus says, "ad multa utilis est." *p.* 523.

[d] Vide *libell. de Flammula Jovis, Dictamno albo, &c.*

ANEMONE PRATENSIS. MEADOW ANEMONE; Or, PASQUE FLOWER.

SYNONYMA. Pulsatilla nigricans. *Pharm. Edinb.* Pulsatilla flore minore nigricante. *Bauh. Pin. p.* 177. Pulsatilla flore minore. *Gerard. Emac. p.* 386. Pulsatilla vulgaris, saturatiore flore. *Clus. Hist. i. p.* 246. Pulsatilla flore clauso obsoleto, petalis reflexis. *Helw. puls. p.* 65. *t.* 11. Pulsatilla foliis decompositis pinnatis, flore pendulo, limbo reflexo. *Hort. Cliff.* 223. A. pratensis. *Flor. Dan.* 611.

Class Polyandria. *Ord.* Polygynia. *Lin. Gen. Plant.* 694.

Ess. Gen. Ch. *Cal.* 0. *Petala* 6-9. *Sem.* plura.

Sp. Ch. A pedunculo involucrato, petalis apice reflexis, foliis bipinnatis.

THE root is perennial, thick, short, and sends off several strong fibres: the flower stem is smooth, beset with soft hairs, near the top furnished with a laciniated involucrum, and rises about six or eight inches in height: the leaves are radical, bipinnated; segments narrow, short, linear, and of a glaucous green colour: it has no calyx: the petals are six, oblong, hairy, of a blackish purple colour, and their apices are turned backwards; the filaments are numerous, slender, about half the length of the petals, and furnished with yellow antheræ: the germens are numerous, collected into a bundle, and supplied with long styles, terminated by tapering blunt stigmata: the seeds are placed on the common receptacle, and retain their styles, which, when the seeds go off, resemble long downy tails.

This Anemone is a native of Germany, where it grows in open fields, and flowers in May. It was first cultivated in England by Mr. Miller in 1731, and as we now find it in our gardens, it very

Anemone pratensis

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much resembles the Anemone Pulsatilla,[a] which grows wild in this country, and would doubtlessly prove a good substitute for the A. pratensis: the principal distinctions between these species, as they grow naturally, are taken from the flower, which in the A. pratensis is more pendulous, smaller, of a darker colour, and has the apices of the petals reflexed, the stem also is said to be less hairy, and shorter than that of the Pulsatilla.[b]

This plant, in its recent state, has scarcely any smell, but its taste is extremely acrid, and when chewed, corrodes the tongue and fauces; and the dried plant likewise still retains a considerable share of acrimony. It also appears from some experiments to contain a camphoraceous matter, which was obtained in the form of crystals, of an unctuous taste, and very inflammable.[c]

This plant, like several others of great activity, has been received into the Materia Medica of the Edinburgh Pharmacopœia, upon the authority of Baron Stoerck, who recommends it as an effectual remedy for most of the chronic diseases affecting the eye, particularly amaurosis, cataract, and opacity of the cornea, proceeding from various causes.[d] He likewise found it of great use in venereal nodes, nocturnal pains, ulcers, caries, indurated glands, suppressed menses, serpiginous eruptions, melancholy, and palsy. The Baron himself, who had for two years suffered much from a violent contusion of his eye, took this remedy, which he soon found occasioned a severe lancinating pain in the part affected: this he considered as a favourable omen of the specific action of the plant; an opinion which was afterwards confirmed in a great

[a] An elegant specimen of this plant is correctly figured in *English Botany*, fig. 51. from which it may be seen how closely it resembles that here annexed, which we obtained through the favour of Mr. Curtis.

[b] We might also add, upon the authority of the *Flor. Dan.* that the leaves of the *pratensis* are somewhat tomentose, while those of the Pulsatilla are of a bright green. See plates 153. and 611.

[c] See *Hann. Mag.* 1779. *n.* 105.

[d] *Lib. de Pulsatilla nigric.*

number of patients. Six cases of amaurosis, three of cataract, and seven of affections of the cornea, we are told were either entirely cured, or greatly benefited, by the exhibition of this remedy. Several cases proving its success in the other disorders which we have noticed above, especially those of syphilis, are also related by the Baron. Many German physicians have since tried the effects of this medicine in diseases of the eyes, and with success; of these we may mention Guildbrand,[e] Hotz,[f] Mohrenheim:[g] several others however bear testimony of its inefficacy in these diseases, as Schmucker,[h] Bergius,[i] Richter,[k] who increased the dose of this vegetable even beyond that directed by Stoerck. Notwithstanding this, Dr. Cullen says, "I would still recommend "it to the attention of my countrymen, and particularly to a "repetition of trials in that disease, so frequently otherwise "incurable, the amaurosis. The negative experiments of Bergius "and others, are not sufficient to discourage all trials, considering "that the disease may depend upon different causes; some of "which may yield to remedies, though others do not."[l]

Every part of the plant, except its root, is ordered for medicinal use, and was by Baron Stoerck prepared for this purpose into an extract, a distilled water, and an infusion; but the first form seems to have been preferred, and was given from seven grains to three or four times that quantity, twice or thrice a day. In large doses it frequently excited nausea and vomiting, or produced griping pains of the bowels, and looseness, and very generally proved diuretic. The fluid preparations of the plant are likewise recommended for external use in ulcers and complaints of the skin. The manner of preparing the extract is given in the Edinburgh Pharmacopœia.

[e] Tode and Nielsen *Diss. de præstantiss. ratione illustrandi Mat. Med. p.* 11.

[f] Jo. Iac. Zimmermann. *Diss. obs. circa Mercur. Ext. Cicut. et Pulsatill.* §. 14. Argent. 1779.

[g] *Chirurg. Beob. T.* 1. & 11.

[h] In *verm. chir. Schrift. t. ii. p.* 26.

[i] *Mat. Med. p.* 491.

[k] Aug. Gottl. Richter *Chir. Bibl. vol.* 6. *p.* 584.

[l] *Mat. Med. vol. ii. p.* 216.

Delphinium Staphisagria

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DELPHINIUM STAPHISAGRIA. — PALMATED LARKSPUR, Or, STAVESACRE.

SYNONYMA. Staphisagria. *Pharm. Lond. & Edinb. Bauh. Pin. p.* 324. *Dod. Pempt. p.* 366. *Gerard. Emac. p,* 495. *Raii Hist. p.* 705. *Park. Theat. p.* 222. *J. Bauh. Hist. iii. p.* 641. Delphinium Platani folio, Staphis agria dictum. *Tourn. Inst. p.* 428. Aconitum urens Ricini fere foliis, flore cæruleo magno, Staphis agria dictum. *Pluk. Almag. p.* 357.

Class Polyandria. *Ord.* Trigynia. *Lin. Gen. Plant.* 681.

Ess. Gen. Ch. *Cal.* 0. *Petala* 5. *Nectarium* bifidum, postice cornutum. *Siliquæ* 3. s. 1.

Sp. Ch. D. nectariis tetraphyllis petalo brevioribus, foliis palmatis: lobis obtusis.

THE root is biennial: the stem is downy, smooth, erect, simple, purplish, and rises from one to two feet in height: the leaves are palmated, dividing into five or seven lobes, which are ovate or lance-shaped, veined, downy, and of a pale green colour: the leaf stalks are long, strong, downy, of the colour of the stem, from which they arise alternately, and are gradually shorter towards the top of the plant, so as to give the whole a regular conical shape: the flowers appear in June; they are large, bluish or purplish, stand upon long footstalks, and terminate the stalk in an open spike: there is no calyx: the corolla is composed of five egg-shaped spreading petals, of which the uppermost is extended backwards, so as to form a hollow spur or horn-like projection:[a] the nectarium is commonly divided into four leaves, which are less

[a] In some flowers we observed two spurs, in others but one, and the nectarium varied accordingly.

than those of the corolla; the two superior are narrow, small, erect, and at the base drawn out into spurs like that of the petal, in which they are both inclosed; the other two are roundish, and plaited at the edges: the filaments are about twenty, short, tapering, and crowned with large yellow antheræ: the germens are three, closely compressing each other, tapering, very downy, and supplied with filiform short styles, terminated by simple stigmata: the three capsules are straight, oblong, tapering, and contain many rough, brown, triangular seeds.

Stavesacre, which is a native of the southern parts of Europe, was cultivated here in the time of Gerard:[b] it is a handsome plant, though less beautiful than many of the other species of Larkspur.

The seeds, which are the only part of the plant directed for medicinal use, are usually imported here from Italy; they are large, rough, of an irregular triangular figure, and of a blackish colour on the outside, but yellowish within; their smell is disagreeable, and somewhat fetid; to the taste they are very bitter, acrid, and nauseous. Their virtues are extracted partially by water, and completely by rectified spirit.

These seeds seem to have been known to the ancients,[c] by whom they were employed as a masticatory, for on being chewed they excite a copious flow of saliva, and on this account were recommended in tooth-achs, and other painful affections of the face and gums. The ancients also prescribed them with a view to their emetic and cathartic effects in doses of ten or fifteen grains:[d] but the deleterious narcotic qualities of Stavesacre were discovered to be so powerful as to forbid its internal use. Schultz, only by keeping it some time in his mouth, to relieve a tooth-ach, was for a time deprived of his senses;[e] and Hillefeld has related, that a dog, by taking five scruples of these seeds, became convulsed, and

[b] In 1596. Vide *Aiton's Hort. Kew.*

[c] Σταφις ἀγρια Dios. eadem videtur, licet Glasti flores adscribat. *Murr. App. Med. vol. iii. p.* 32.

[d] Vide *Dioscor. & De la Boe Sylvius. De purg. &c.*

[e] See his *Mat. Med. p.* 435.

Helleborus niger.

soon died.[f] Stavesacre is now therefore confined to external use in some kinds of cutaneous eruption, but more especially for destroying lice and other insects; and by its efficacy in this way, this plant, in most of the European languages, is distinguished by the mame of Louse-wort.

[f] *Diss. de Venen. p.* 20.

HELLEBORUS NIGER. BLACK HELLEBORE, Or, CHRISTMAS ROSE.

SYNONYMA. Helleborus Niger, seu Melampodium.[*] *Pharm. Lond. & Edin.* Helleborus Niger legitimus. *Clus. Hist.* 274. Helleborus Niger flore roseo. *Bauh. Pin.* 186. Helleborus Niger flore albo; interdum etiam valde rubente. *J. Bauh.* 3. 635. Helleborus Niger verus. *Gerard's Herb.* 975. *True Black Hellebore,* or Christmas Flower. *Raii Hist. Plant.* 697. An nostra planta sit Ελλεβορος μελας et Μελαμποδιον Græcor. et Helleborus, Elleborus, Veratrum, Latinorum, nihil certi pronunciari possit.

Class Polyandria. *Order* Polygynia. *L. Gen. Plant.* 702.

Ess. Gen. Ch. Cal. 0. *Petala* 5 s. plura. *Nectaria* bilabiata, tubulata. *Caps.* polyspermæ, erectiusculæ.

Sp. Ch. H. Scapo subbiflore subnudo, foliis pedatis.

THE root is perennial, rough, knotted, and externally of a black colour, internally whitish, sending off many strong round long fibres; the flower stalks are erect, round, tapering, and

[*] A Melampo qui primus purgationem instituit: unde καθαρτης, id est purgator nominatus fuit, & hocce medicamento Prœti filias in furorem actas persanavit. Geoff.

towards the bottom reddish; the bracteal leaves supply the place of the calyx, and are oval, concave, and generally indented at the top; the petals are five, large, roundish, spreading, at first of a white colour, succeeded by reddish tints, but finally putting on a greenish appearance; the nectaria are about eight in number, tubulated, somewhat compressed, bilabiated, and of a greenish yellow colour; the filaments are white, the antheræ yellow; the germina vary, commonly from four to eight, and the capsules, or pods, contain many oval shining blackish seeds; the leaves are compound, divided in a peculiar manner, or pedated, and stand upon long radical footstalks; the simple leaf is elliptical, smooth, thick, and serrated towards the top. This plant is a native of Austria and Italy, and was unknown to the gardens in this country till cultivated by Mr. John Gerard in 1596. If the weather be sufficiently mild, it flowers in January, and hence the name of Christmas Flower.

If any arguments were required to evince the necessity of botanical accuracy in discriminating medicinal plants, the Helleborus Niger would furnish us with many facts from which such arguments might be deduced. For many instances are recorded of the effects of this plant, by which it since appears that other plants were mistaken for it, and actually employed; of these we may enumerate the Helleborus viridis, Adonis vernalis, Trollius europæus, Actæa spicata, Astrantia major, and Aconitum Napellus;[b] and as the roots of these plants possess very different powers, we cannot be surprised that the medical history of this root is not only confused and contradictory, but calculated to produce very mischievous and even fatal consequences.

The taste of the fresh root is bitterish, and somewhat acrid, and according to Grew, "being chewed, and for some time retained upon the tongue, after a few minutes it seemeth to be benumbed, and affected with a kind of paralytic stupor, or as when it has been

[b] Probably art, as well as ignorance, had some share in these substitutions; for the particulars of which see Murray's Ap. Med. vol. 3. from p. 44. to p. 50.

burnt with eating or supping any thing too hot."[c] It also emits a nauseous acrid smell, but being long kept, both its sensible qualities and medicinal activity suffer very considerable diminution. Bergius has very properly attended to this circumstance, for in defining its virtues he considers it under three different degrees of dryness:[d] "VIRTUS: *rec.* venenata, rubefaciens, vesicans; *recenter siccatæ:* emetica, purgans, emmenagoga, antiphthiriaca, sternutatoria; *diu conservatæ:* vix purgans, alterans, diuretica." Although many writers consider this root to be a perfectly innocent and safe medicine, yet we find several proofs of its poisonous effects,[e] from which Murray collects the following symptoms:—" Fateor, dispersas hinc inde extare observationes contrarias, querelas moveri de vomitionibus effrænis inde contractis, hypercatharsi, torminibus, anxietate, siti, singultu, animi deliquiis, sudoribus frigidis, faucium strangulatione, convulsionibus, sternutatione, tórpore quodum artuum et insueta rigiditate, inflammatione ventriculi et intestinorum, quin morte pedissequa prævíis variis dictis malis."

It seems to have been principally from its purgative quality that the ancients esteemed this root such a powerful remedy in maniacal disorders, with a view to evacuate the *atra bilis,* from which these mental diseases were supposed to be produced; but though evacuations be often found necessary in various cases of alienations of mind, yet as they can be procured with more certainty and safety by other medicines, this catholicon of antiquity

[c] On tastes, vide Anatomy of Plants, p. 283.

[d] Mat. Med. p. 496.

[e] Vide Doering De Medicina et Medicis, p. 242. Act. Helv. vol. 5. p. 326. Buchner Diss. de salut. et noxio Ellebori Nigri usu. p. 22. Hildanus Obs. Med. chir. cent. 4. obs. 12. Scopoli Fl. carn. ed. 1. p. 557. Morgagni de sed. & caus. morb. Epist. 59. art. 15. et Act. Helv. l. c. Hartman Vet. Acad. Handl. a 1762. p. 276. Schultz Mat. Med. p. 152.

is now almost entirely abandoned.[f] At present it is looked upon chiefly as an alterative, and in this light is frequently employed in small doses for attenuating viscid humours, promoting the uterine and urinary discharges, and opening inveterate obstructions of the remoter glands:[g] it often proves a very powerful emmenagogue in plethoric habits, where steel is ineffectual, or improper.[h] It is also recommended in dropsies,[i] and some cutaneous diseases.[k] The watery extract of this root, made after the manner directed in the pharmacopœias, is one of the best and safest preparations of it,[l] when designed for a cathartic, as it contains both the purgative and diuretic parts of the Hellebore; it may be given in a dose from ten grains to a scruple, or more. A tincture of this drug is also ordered in the pharmacopœias, which is preferred for the purposes of an alterative and deobstruent; of which a tea-spoonful twice a day may be considered as a common dose.

[f] Whether our Hellebore be the same species as that said to grow in the island of Anticyra, and about Mount Olympus, so frequently alluded to by the Latin poets, is no easy matter to determine. From the accounts of Tournefort and Bellonius, who botanized these places, a species of this plant was found in great plenty, which the former supposes to be the Hellebore of Hippocrates; it differs from the species here figured, by having a large branched stem, and also by its effects, for he found that a scruple of the extract brought on violent spasms and convulsions. Many plants however are known to vary as much by a removal from their native soil and climate.

[g] Duncan's Ed. New Dispensatory. Lewis's Mat. Med.

[h] Mead, (mon. et præc. med. p. 138) speaks of it as the most potent of all emmenagogues; but Home (clin. exper. & hist. p. 836) and Pasta (Dissertaz. mediche sopra i mestrui delle Donne, p. 192 found it often successful.

[i] By Avicenna, Gesner, Klein, Milman, and Bacher whose famous *tonic pills* are thus prepared: ℞ Ext. Helleb. Nig. Myrrhæ Solutæ aa ʒj pulv. Card. bened. ʒiij M. F. s. a. Massa aëre sicco exsiccanda, donec formandis pilulis apta sit, singul. ad gran. semiss. [k] In the lepra Græcorum. Vide Aretæus Oper. ed. Boerh. p. 136. Schmidel Diss. de lepra in Haller's collect. Disp. pract. T. 6. p. 83. And Hildanus mentions the case of a girl who was cured of an obstinate scabies of the face by this extract. l. c. [l] The irritating power of its active matter being considerably abated by the boiling. Lewis's M. M.

Helleborus foetidus

Published by W. Phillips, Oct. 1. 1808

HELLEBORUS FOETIDUS. FETID HELLEBORE, Or, BEAR's-FOOT.

SYNONYMA. Helleboraster. Pharm. Lond. Helleborus Niger Fœtidus. *Bauh. Pin.* 185. Helleboraster maximus flore & semine prægnans. *Lobel.* p. 679. Helleboraster maximus. *Gerard. Herb.* p. 977. Helleborus maximus sive Consiligo. *Park.* t. 212. Helleborus caule ramoso, multifloro, foliis multipartitis, serratis, stipulis ovato-lanceolatis, coloratis. *Haller's Stirp. Helv.* p. 1193. Elleborus niger sylvestris adulterinus etiam hyeme virens. *J. Bauh.* 3. p. 880. Veratrum nigrum 3. *Dodon. Pempt.* 382. *Great Black Hellebore,* or Bear's Foot. *Setterwort, Raii Synopsis,* p. 271. *Withering's Bot. Arrang.* 582. *Relhan's Flor. Cant.* p. 218.

Class Polyandria. *Ord.* Polygynia. *L. Gen. Plant.* 702.

Ess. Gen. Ch. Cal. 0. *Petala* 5 s. plura. *Nectaria* bilabiata, tubulata. *Caps.* polyspermæ, erectiusculæ.

Sp. Ch. H. caule multifloro folioso, foliis pedatis.

THE root is small, but beset with a prodigious number of slender dark coloured fibres;[a] the stem rises to the height of a foot and a half, or more, towards the bottom it is round, strong, firm, naked, and marked with alternate cicatrices, the vestiges of the former leaves; at the top it divides and subdivides into branches, producing many flowers, and is garnished with scaly leaves, or bracteæ; the leaves are numerous, and stand upon long footstalks, surrounding the middle of the stem; they are divided

[a] Gerard's description we find very just. "The root consisteth of many small black strings, involved or wrapped one within another very intricately." Johnson's Gerard, 977.

like the Helleborus niger into simple leaves, which are commonly eight or nine, long, narrow, lanceolated, serrated, and of a dark green colour; the scaly leaves, placed at the ramifications of the flower stem, are smooth, trifid, alternate, and often purplish, but those near the flowers are oval and pointed; the flowers are numerous, terminal, pendent, of a roundish shape, and stand upon peduncles, forming a sort of umbel; the petals are five, oval, concave, persistent, of a pale green colour, and their margins are usually tinged with purple; the stamina are the length of the petals; the antheræ are white; the germina three, hairy, and shaped similarly to those of the Helleborus niger. This plant grows wild in many parts of England, and flowers about February.

The Helleborus niger, though constantly used in medicine since the time of Hippocrates, was the only species of Hellebore[b] known in the Materia Medica of our pharmacopœias, till the late introduction of this plant by the London College, probably upon the authority of Dr. Bisset, who recommends the leaves as possessing extraordinary anthelminthic powers. The smell of the recent plant is extremely fetid, and the taste is bitter, and remarkably acrid, insomuch, that when chewed, it excoriates the mouth and fauces; it commonly operates as a cathartic, sometimes as an emetic, and in large doses proves highly deleterious.[c] The leaves, the only part noticed by the College, have been long domestically employed in this country for their vermifuge effects, and are thus spoken of by Gerard:—" The leaves of bastard Hellebor, dried in an oven, after the bread is drawne out, and the pouder thereof taken in a figge or raisin, or strawed upon a piece of bread spread with honey, and eaten, killeth worms in children exceedingly."[d] Bisset says, " The great bastard black Hellebore, or Bear's-Foot,

[b] It must be observed, that the Helleborus Albus of the shops, is a Veratrum.

[c] Vide Threlkeld's Irish Herbal; and in the Oxford Magazine for March 1769, p. 99. fatal cases are related by John Cook of Oxford.

[d] Gerard l. c.

is by far the most powerful vermifuge for long round worms of any I have yet experienced. The anthelminthic virtue of this plant is well known to the vulgar in the Dutchy of Cleveland, Yorkshire, who generally give it to their children when they suspect them to have worms. The decoction of about a dram of the green leaves, or about fifteen grains of the dried leaves in powder, is the usual dose administered to children betwixt four and seven years of age; a full or sufficient dose generally proves more or less emetic, and often loosens the belly a little. It is usually repeated on two, and sometimes three successive mornings. The second dose has commonly a greater effect than the first, and never fails to expel round worms by stool, if there be any lodged in the alimentary tube."

" The juice of the green leaves of the Bear's-Foot, made into a syrup with coarse sugar, is almost the only vermifuge I have used against round worms for three years past. Before pressing out the juice, I moisten the bruised leaves, which are a little succulent, with some vinegar, which is a corrector of this medicine, and prevents it from inducing great sickness, or much vomiting. Of this syrup I give one tea-spoonful at bed-time, and one or two in the morning, on two or three successive days, to children betwixt two and six years of age; increasing or diminishing the dose a little, according to the strength of the patient." [c] When this does not open the body, an equal quantity of tincture of rhubarb is directed to be added.

[c] An essay on the Medical Constitution of Great Britain, p. 235. and p. 339. Dr. B. speaks of this plant as useful also in some asthmatic and hypochondriacal disorders.

We have tried the anthelminthic effects of this plant upon a girl of twenty years of age, (a patient in the Middlesex Dispensary) with considerable advantage.

CLEMATIS RECTA. UPRIGHT VIRGIN's BOWER.

SYNONYMA. Flammula Jovis. *Pharm. Edinb.* Flammula recta. *Bauh. Pin. p.* 300. Clematis sive Flammula surrecta alba. *J. Bauh. Hist. vol. ii. p.* 127. Flammula Jovis surrecta. *Gerard. Emac. p.* 888. *Park. Theat. p.* 382. *Raii Hist. p.* 621. *sp.* 4. Clematis caule erecto, foliis pinnatis ovato-lanceolatis. *Hal. Stirp. Helv. n.* 1144. *Flor. Aust. tab.* 291. *Stoerck Libell. de Flam. Jovis, tab.* 1.

Class Polyandria. *Ord.* Polygynia. *Lin. Gen. Plant.* 696.

Ess. Gen. Ch. Cal. 0. *Petala* 4—6. *Sem.* caudata.

Sp. Ch. C. foliis pinnatis: foliolis ovato-lanceolatis integerrimis, caule erecto, floribus pentapetalis tetrapetalisque.

THE root is perennial, white, and fibrous: the stalk is erect, scored, round, smooth, branched towards the top, and rises about two feet in height: the leaves are opposite, and pinnated, the pinnæ are placed in pairs, and terminated by an odd one; they are all ovally lance-shaped, acute, entire, smooth, and veined. The flowers terminate the stem and branches in irregular umbels: there is no calyx: the petals are four or five, of an oval shape, and whitish colour: the filaments are numerous, erect, tapering, shorter than the petals, and terminated by the antheræ, which are scored on each side: the germina are many, roundish, hairy, and support bearded styles, of the length of the stamina, and crowned with obtuse stigmata: the seeds are roundish, compressed, and attached to the styles, which appear like long feathered tails; and hence the name, sem. *caudata.*

Clematis recta

Published by W. Phillips, New Bond Street

This plant is a native of Hungary, Austria, and France, and flowers from June till August: it was first cultivated in England by Gerard, previous to the year 1597, and is now sufficiently known to the British gardeners. This, like some other species of the clematis, is extremely acrid, and hence the name Flammula. The recent leaves, upon being chewed, excite a burning heat of the tongue and fauces, and if retained long in the mouth, produce blisters and ulceration; but, by drying, this acrimony is considerably diminished: the flowers likewise possess a share of acrimony, though in a less degree. The Flammula Jovis, although mentioned by Dale and some others as an external remedy, was first recommended to the attention of practitioners by Baron Stoerck in 1769, as an useful medicine in many obstinate complaints.‡ He published several cases of its successful exhibition, particularly in inveterate syphilitic diseases producing head-aches, pains in the bones, nodes, ulcers, cutaneous affections, &c.*

Whether this plant really deserves the character which the Baron has thus attempted to establish, by stating its uniform success in twenty-two cases out of twenty-four, in which it was tried, rests solely upon his own authority; and it is with concern we observe, that the medical facts at Vienna are not very confidently received by the physicians in this country. It was usual for Dr. Stoerck to employ the leaves and flowers, as well as an extract prepared from the former, yet the preparation which he chiefly recommends is an infusion of two or three drams of the leaves in a pint of boiling water; of which he gave four ounces three times a day, while the powdered leaves were applied as an escharotic to the ulcers.

‡ Although these were principally venereal, yet in ulcers, cancers, and severe head-aches, not proceeding from this cause, the Flammula Jovis is said to have been likewise successful; and in his Lib. de Pulsat. p. 57. we are told of its remarkable efficacy in a case of melancholia tristissima. It generally acted as a diuretic or diaphoretic.

* Vide *Libell. de Flammula Jovis.*

RANUNCULUS ACRIS — UPRIGHT MEADOW CROWFOOT.

SYNONYMA. Ranunculus pratensis. *Pharm. Murray. iii.* 75. Ranunculus foliis hirsutis semitrilobis, lobis lateralibus bipartitis, foliis caulinis semitrilobis. *Hall. Stirp. Helv. n.* 1169. Ranunculus pratensis erectus acris. *Bauh. Pin.* 178. *Ger. Emac.* 951. *Park. Theat.* 329. *Ray. Synop.* 248. R. acris. *Huds. Flor. Ang.* 211. *Withering Bot. Arr.* 576. *Scop. Flor. Carniol.* 398. *Ic. Curt. Flor. Lond.*

Polyandria Polygynia. *Lin. Gen. Plant.* 699.

Gen. Ch. *Cal.* 5-phyllus. *Petala* 5 intra ungues poro mellifero. *Sem.* nuda.

Sp. Ch. R. calycibus patulis, pedunculis teretibus, foliis tripartitomultifidis, summis linearibus.

ROOT perennial, consisting entirely of long white slender fibres. Stalk erect, branched near the top, round, hairy, about two feet in height. Leaves on long upright footstalks, trifid, subdividing into smaller laciniated lobes, marked beneath with small prominent reticulated veins: at the base of the peduncles, the leaves are simple, linear, and fringed with hairs. Flowers yellow, terminal, on long round hairy peduncles. Calyx of five leaves, which are ovate, spreading, hairy, yellowish. Corolla of five petals, yellow, shining, heart-shaped, commonly notched at the top. Filaments numerous, short, furnished with yellow inclining antheræ. Nectarium, a small scale at the base of each petal. Germina numerous, forming an orbicular head. Styles none. Stigmata reflexed. Seeds numerous, roundish, of a brown colour.

. *Ranunculus acris*

Published by W. Phillips, Nov.ʳ 1ˢᵗ 1808

It is a native of meadows and moist pastures, flowering in June and July.

The great acrimony of this, and many of the other species of Ranunculus, is such, that on being applied to the skin they excite itching, redness, and inflammation, and even produce blisters, tumefaction, and ulceration of the part. On being chewed they corrode the tongue; and, if taken into the stomach, bring on all the deleterious effects of an acrid poison.

The corrosive acrimony, which this family of plants possesses was not unknown to the ancients, as appears from the writings of Dioscorides; but its nature and extent had never been investigated by experiments before those instituted by C. Krapf[a] at Vienna, by which we learn that the most virulent of the Linnean species of Ranunculus are the bulbosus, sceleratus, acris, avensis, thora, and illyricus. The effects of these were tried either upon himself, or upon dogs, and show, that the acrimony of the different species is often confined to certain parts of the plant, manifesting itself either in the roots, stalks, leaves, flowers, or buds: the expressed juice, extract, decoction, and infusion of these plants were also subjected to experiments.

In addition to these species, mentioned by Krapf, we may also notice the R. Flammula, and especially the R. Alpestris, which, according to Haller, is the most acrid of this genus. However, as the species here delineated is a common English plant, and possesses this active principle diffused in a very considerable degree throughout the whole herb, it has been judged proper to select it for this work as a sufficient example and representative of the whole tribe.

Mr. Curtis observes that even pulling up this plant, and carrying

[a] Vide *Experimenta de nonnullorum Ranunculorum venenata qualitate, horum externo et interno usu.* 1766.

The R. sceleratus seems more corrosive than the R. acris; and we are told by Dr. Withering, that "beggars are said to use it to ulcerate their feet, which they expose in that state to excite compassion."

it to some little distance, excited a considerable inflammation in the palm of the hand in which it was held.

It is necessary to remark, that the acrimonious quality of these plants is not of a fixed nature; for it may be completely dissipated by heat; and the plant on being thoroughly dried, becomes perfectly bland.

Krapf attempted to counteract this venomous acrimony of the Ranunculus by means of various other vegetables, none of which was found to answer the purpose, though he thought that the juice of sorrel, and that of unripe currants, had some effect in this way; yet these were much less availing than water; while vinegar, honey, sugar, wine, spirit, mineral acids, oil of tartar, p. d. and other sapid substances manifestly rendered the acrimony more corrosive. It may be also noticed, that the virulency of this plant, as well as of most others, depends much upon the situation in which they grow, and is greatly diminished in the cultivated plant.

This and some other species of Ranunculus have, for medical purposes, been chiefly employed externally as a vesicatory, and are said to have the advantage of a common blistering plaster, in producing a quicker effect, and never causing stranguary. But, on the other hand, it has been observed, that the Ranunculus is less certain in its operation, and that it sometimes occasions ulcers, which prove very troublesome and difficult to heal. Therefore their use seems to be applicable only to certain fixed pains,[b] and such complaints as require a long continued topical stimulus, or discharge from the part, in the way of an issue, which in various cases has been found to be a powerful remedy.

[b] Cases of its success in chronic rheumatism, and other complaints, are related by Chesnau *(obs. med.)* Baglir. *(oper. p.* 113.) Stoerck *(ann. med. ii. p.* 125.)

The manner of using the plant is to bruise it in a mortar, and to apply it to the skin as a poultice or plaster.

Paeonia officinalis.

Published by W. Phillips, Nov.ʳ 4.1808.

PÆONIA OFFICINALIS. COMMON PEONY.

SYNONYMA. Pæonia. *Pharm. Dale.* 175. *Alston. i.* 485. *Lewis.* 470. *Edinb. New Disp.* 246. *Murray. iii.* 37. *Bergius.* 477. Pæonia folio nigricante splendido, quæ mas—et. Pæonia fœmina, &c. *Bauh. Pin.* 323. *Ger. Emac.* 980. *Park. Theat.* 1381. *Ray. Hist.* 693. Pæonia foliis lobatis ex ovato-lanceolatis. *Hall. Helv. Miller. Dict. Ic. Mill. Illust.*

Polyandria Digynia. *Lin. Gen. Plant.* 678.

Gen. Ch. *Cal.* 5-phyllus. *Petala* 5. *Styli* 0. *Caps.* polyspermæ.

Sp. Ch. P. foliolis oblongis.

ROOT perennial, large, knobby, externally brown, internally white, compact. Stalks two feet in height, thick, smooth, succulent, branched. Leaves pinnated, or cut into lobes, which are oblong, few, terminated by an odd one. Flowers large, terminal, solitary, red. Calyx composed of five unequal ovate concave leaves. Corolla naturally consisting of five large petals, which are roundish and concave. Filaments about thirty, short, slender, supporting oblong quadrangular antheræ. Germina two, ovate, erect, hairy. Styles none. Stigmata hooked. Capsules two, hairy, oblong, inclining outwardly, single-celled, single-valved, and containing numerous small seeds.

Peony is a native of Switzerland: it has been cultivated in Britain since the time of Turner, and is now a common plant in the English gardens, where it flowers in May and June.

This plant has long been considered as a powerful medicine; and, till the late revision of the Pharmacopœia by the London

College, it had a place in the catalogue of the Materia Medica; in which the two common varieties of this plant are indiscriminately directed for use, and, on the authority of C. Bauhine, improperly distinguished into male and female Peony.

" The roots and seeds of Peony have, when fresh, a faint unpleasant smell, somewhat of the narcotic kind; and a mucilaginous subacrid taste, with a slight degree of bitterness and astringency. In drying they lose their smell, and part of their taste. Extracts made from them by water are almost insipid, as well as inodorous; but extracts made by rectified spirit are manifestly bitterish and considerably astringent.

" The flowers have rather more smell than any of the other parts of the plant, and a rough sweetish taste, which they impart, together with their colour, both to water and spirit."[a]

The roots, flowers, and seeds of Peony have been esteemed in the character of an anodyne and corroborant, but more especially the roots; which since the days of Galen[b] have been very commonly employed as a remedy for the epilepsy. For this purpose it was usual to cut the root into thin slices, which were to be attached to a string, and suspended about the neck as an amulet; if this failed of success, the patient was to have recourse to the internal use of this root, which Willis[c] directs to be given in the form of powder, and in the quantity of a dram two or three times a day, by which, as we are informed, both infants and adults were cured of this disease. Other authors recommend the expressed juice to be given in wine, and sweetened with sugar, as the most effectual way of administering this plant. Many writers,[d] however, especially in modern times, from repeated trials of the Peony in epileptic cases, have found it of no use whatever; though professor Home, who gave the radix pæoniæ to two

[a] *Lewis. l. c.*

[b] *De simp. lib.* 6. *p.* 807. *Rice.*

[c] *Pathol. Cerebri. cap.* 3.

[d] Boerhaave, Haller, Tissot, and others.

Ruta graveolens

Published by W Phillips, Nov.1st 1808.

Epileptics at the Edinburgh Infirmary, declares that one received a temporary advantage from its use.[c]

Of the good effects of this plant in other disorders we find no instances recorded.

[c] See *Clinical Experiments, &c. p.* 209.

RUTA GRAVEOLENS. COMMON RUE.

SYNONYMA. Ruta. *Pharm. Lond. & Edinb.* Ruta hortensis. *Gerard. Emac.* p. 1255. Ruta hortensis major. *Park. Theat.* p. 132. Ruta sativa vel hortensis. *Bauh. Hist.* iii. p. 197. Ruta hortensis latifolia. *Bauh. Pin.* p. 336. *Raii. Hist.* p. 874. Ruta foliis duplicato-pinnatis, lobulis ovatis. *Hal. Stirp. Helv.* No. 1003. Ρυτη *seu* Πηγανον *Græc.*

Class Decandria. *Ord.* Monogynia. *Lin. Gen. Plant.* 523.

Ess. Gen. Ch. *Cal.* 5-partitus. *Petala* concava. *Receptac.* punctis melliferis decem cinctum. *Caps* lobata. *Quinta pars numeri in quibusdam excluditur.*

Sp. Ch. R. foliis decompositis, floribus lateralibus quadrifidis.

THE root sends forth several shrubby stalks, which towards the bottom are strong, woody, and covered with rough, grey, striated bark; the upper or young branches are smooth, and of a pale green colour: the leaves are compound, consisting of double sets of irregular pinnæ, which are minutely notched or crenulated, of an obversely oval shape, and of a glaucous or bluish green colour: the flowers are numerous, and produced in a branched corymbus on subdividing peduncles: the calyx commonly divides into four and sometimes into five pointed leaves; the corolla con-

sists of four and frequently of five petals, these are hollow or boat-shaped, dentated or fringed at the edges, and of a yellow colour; the ten filaments are yellow, tapering, spreading, and generally lodged in the cavity of the petals; the antheræ are yellow and quadrangular; the style is short; the stigma is simple; and the germen is large, oval, green, rough, and marked by four longitudinal furrows; the seeds are angular, rough, and of a blackish colour. The shrub is a native of the South of Europe, and flowers in June and September.

The first account we have of the cultivation of Rue in Britain, is given by Turner, who published his Herbal in 1562.[a] It is now extremely common in our gardens, where it retains its verdure the whole year. Rue has a strong ungrateful smell, and a bitter, hot, penetrating taste; the leaves are so acrid, that by much handling they are said to irritate and inflame the skin; and the plant, in its natural or uncultivated state, is reported to possess these sensible qualities still more powerfully. Both water and rectified spirit extract its virtues, but the latter more perfectly than the former.*

Rue was much used by the ancients, who ascribed to it many virtues. Hippocrates commends it as a resolvent and diuretic, and attributes to it the power of resisting the action of contagion, and other kinds of poisons, and with this intention it was used by Mithridates:[b] this imaginary quality ‡ of the Ruta, is now however

[a] Vide Hort. Kew.

* From the experiments of Beaumé it appears, that the recent plant contains but a very small portion of essential oil: thus from 21 lb. of the leaves he scarcely obtained a dram, while 10 lb. of the seeds yielded two ounces. Berg. M. M. p. 350.

[b] In sanctuariis Mithridatis maximi regis devicti, Cn. Pompeius invenit, in peculiari commentario ipsius manu, compositionem antidoti, e duabus nucibus siccis, item ficis totidem & rutæ foliis viginti simul tritis, addito salis grano: & qui hoc jejunus sumat, nullum venenum nociturum illo die. Plin. L. 23. c. 8. p. 604.

‡ "One virtue particularly ascribed to Rue, that of resisting contagion, or of expelling it when taken in, I hold to be absolutely without foundation."—Cullen M. M. v. ii. p. 365.

very little credited, though so highly extolled by Boerhaave.[c] According to Bergius it is "alexiteria, pellens, emmenagoga, sudorifera, rubifaciens." It is doubtless a powerful stimulant, and may be considered, like other medicines of the fetid kind, to have attenuating, deobstruent, and antispasmodic powers,[d] and to be more peculiarly adapted to phlegmatic habits, or weak and hysterical constitutions, suffering from retarded or obstructed secretions. In the London Pharm. Ruta is directed in the form of an extract, and it is also an ingredient in the Pulvis e myrrha compositus. By some it is employed in the way of tea.

[c] The opinion formerly entertained of this plant, may be collected from the Schola Salernitana, in which its virtues are thus celebrated. c. 37. p. 427.

Nobilis est ruta, quia lumina reddit acuta;
Auxilio rutæ, vir lippe videbis acute;
Cruda comesta recens, oculos caligine purgat.
Ruta viris minuit Venerem, mulieribus addit.
Ruta facit castum, dat lumen, & ingerit astum.
Cocta & facit ruta de publicibus loca tuta.

[d] "I have no doubt in asserting its antispasmodic powers." Cullen M. M. v. ii. p. 365.

The following are the remaining medicinal plants of this order which we have not thought sufficiently important to require any particular consideration:

Systematic Names.	Officinal.	English.
Aquilegia vulgaris	Aquilegia	Columbine
Aconitum Anthora	Anthora	Wholesome Woolf's-bane
Delphinium Consolida	Consolida regalis	Branched Larkspur
Nigella sativa	Nigella	Fennel-flower
Ranunculus sceleratus	R. palustris	Marsh Crowfoot
——— Flammula	Flammula	Spearwort Crowfoot
——— bulbosus	R. bulbosus	Bulbou Crowfoot
——— Ficaria	Chelidonium minus	Pilewort Crowfoot
Anemone nemorosa	Ranunculus albus	Wood Anemone
——— Hepatica	Hepatica nobilis	Blue Hepatica
Thalictrum flavum	Thalictrum	Meadow Rue

ORD. XXVII. SENTICOSÆ.

(From *Sentis,* a Briar or Bramble.)

Spinous or rough Plants.

POTENTILLA REPTANS. COMMON CINQUEFOIL.

SYNONYMA. Pentaphyllum. *Pharm. Lond.* Quinquefolium majus repens. *Bauh. Pin. p.* 325. Quinquefolium vulgare. *Gerard. Emac. p.* 987. Pentaphyllum vulgatissimum. *Park. Theat. p.* 398. *Raii Hist. p.* 611. *Synop. p.* 255. *J. Bauh. Hist. p.* 397. Fragara foliis quinatis, serratis, petiolis unifloris, caule reptante. *Hal. Stirp. Helv. n.* 1118. *Withering. Bot. Arrang. p.* 534. *Curtis Flor. Lond.*

Class Icosandria. *Ord.* Polygynia. *Lin. Gen. Plant.* 634.

Ess. Gen. Ch. Cal. 10-fidus. *Petala* 5. *Sem.* subrotunda, nuda, receptaculo parvo ex succo affixa.

Sp. Ch. P. foliis quinatis, caule repente, pedunculis unifloris.

THE root is perennial, long, tapering, or fusiform, furnished with but few fibres, internally reddish, and externally of a yellowish brown colour: the stalks are numerous, slender, purplish, smooth, and creeping: the leaves are quinate, or five,

Potentilla reptans

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placed together, and sometimes seven, of unequal size, elliptical, obtuse, serrated, veined, somewhat hairy, and sitting close to the common footstalk, which is of considerable length, and rises from the stoloniferous joints of the stem: the stipulæ stand in pairs, and are composed of three ovalish seeds: the flowers are yellow, and placed singly upon long slender peduncles: the corolla consists of five petals, which are inversely heart-shaped, of a bright yellow colour, and inserted into the calyx by short claws: the calyx is a perianthium of one leaf, divided into ten pointed segments, which are alternately smaller, and frequently turned back: the filaments are about twenty, short, tapering, and inserted at the glandular base of the calyx, and crowned by oblong, flattish, double-celled yellow antheræ: the germina are numerous, and form a conical head, supporting short styles, terminated by blunt stigmata: the seeds are numerous, small, and of a brown colour. It flowers from July till September, and is common on meadow banks, and on the sides of roads.

The roots of this plant have a bitterish styptic taste, and give out their astringent matter both to water and spirit. They were used by Hippocrates and Dioscorides, and by the former particularly recommended for the cure of intermittents.[a] And Ray tells us, that the peasantry still employ them with this intention.[b] The medicinal quality of Cinquefoil is confined to the external or cortical part of the root, and depends merely upon its astringent effects; it has therefore been chiefly prescribed internally in diarrhœas and other fluxes, and externally in gargles and astringent lotions: but as its efficacy is much inferior to many other plants of this class, the Cinquefoil is now rarely used. In large doses, however, it may be found no bad substitute for some of the other astringents.

[a] *De Morb. l. 2. p. 473.* Fëos.

[b] *Hist. Plant. p. c.* See also Senac *de recond. febr. interm. nat. p. 185.*

RUBUS IDÆUS. RASPBERRY BUSH.

SYNONYMA. Rubus idæus. *Pharm. Lond.* Rubus idæus spinosus fructu rubro. *J. Bauh. Hist. vol. ii. p.* 59. *Raii Hist. p.* 1640. *Synop. p.* 467. Rubus caule spinoso, subrecto, foliis quinatis et ternatis, subtus tomentosis, fructibus hirsutis. *Hall. Stirp. Helv. no.* 1108. Rubus idæus. *Gerard, Emac. p.* 1272. *Park. Theat. p.* 557. *Huds. Ang. p.* 219. *Lightf. Scot. p.* 263. *Withering. Bot. Arrang. p.* 525. *Flor. Dan.* 788. α Red Raspberry. β White Raspberry. γ Smooth Raspberry. *Aiton. Hort. Kew.*

Class Icosandria. *Ord.* Polygynia. *Lin. Gen. Plant.* 632.

Ess. Gen. Ch. *Cal.* 5-fidus. *Petala.* 5. *Bacca* composita: acinis monospermia.

Sp. Ch. R. foliis quinato-pinnatis ternatisque, caule aculeato, petiolis canaliculatis.

THE stems of the Raspberry are biennial, rough, beset with spines, and rise two or three feet in height: the leaves are rough, veined, serrated, downy on the underside, and composed of five or three pair of oval pinnæ, terminated by an odd one: the flowers terminate the branches in pannicles, and appear in succession: the calyx is divided into five oblong expanding segments: the corolla consists of five petals, which are upright, blunt, narrow, white, and inserted into the calyx: the filaments are numerous, shorter than the petals, fixed to the calyx, and terminated with roundish compressed antheræ: the germens are numerous, and each supports a short capillary style, furnished with a simple permanent stigma: the fruit is a red berry, composed of several roundish granulations, collected into a knob,

Rubus idæus

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Rosa canina

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which is convex above, concave beneath, and placed upon a conical receptacle: each granulation has one cell, containing an oblong seed. It is a native of Britain, usually growing about woods, hedges, rocky mountains, and in moist situations, producing its flowers in May and June.

The Raspberry is very commonly cultivated in our gardens, where we frequently observe the varieties noticed above. The figure, which accompanies this description, is taken from a garden specimen, and consequently appears more luxuriant than when the Raspberry is found in its natural or uncultivated state. This fruit has a pleasant sweet taste, accompanied with a peculiarly grateful flavour, on account of which it is chiefly valued. Its virtues consist in allaying heat and thirst, and in promoting the natural excretions; but it seems less adapted to answer these purposes than many of the other summer fruits, some of which we have already noticed.

A grateful syrup, prepared from the juice, is directed for officinal use by the London Pharmacopœia.

ROSA CANINA. DOG ROSE, Or, HEP TREE.

SYNONYMA. Cynosbatus. *Pharm. Lond.* Rosa sylvestris vulgaris, flore odorato incarnato. *Bauh. Pin. p.* 483. Rosa sylvestris inodorata, seu canina. *Park. Theat. p.* 1017. *Raii Hist. p.* 1470. *Synop. p.* 454. *Gerard. Emac. p.* 1270. Rosa spinis aduncis, foliis septenis, calycibus tomentosis, segmentis pinnatis & semipinnatis tubis brevissimis. *Hal. Stirp. Helv.* 1101. Rosa canina. *Huds. Ang. p.* 219. *Lightf. Scot. p.* 262. *Ed.* 1789. *Withering. Bot. Arr. p.* 523. *Curt. Flor. Lond. Flor. Dan.* 555.

Class Icosandria. *Ord.* Polygynia. *Lin. Gen. Plant.* 631.

Ess. Gen. Ch. *Petala.* 5. *Cal.* urceolatus, 5-fidus, carnosus, collo coarctatus. *Sem.* plurima, hispida, calycis interiori affixa.

Sp. Ch. R. germinibus ovatis pedunculisque glabris, caule petiolisque aculeatis.

THIS small tree usually rises ten or twelve feet in height, dividing towards the top into many branches, covered with smooth bark, and beset with alternate hooked prickles: the leaves are pinnated, consisting of two or three pair of pinnæ or leafits, with an odd one at the end; they are all of an oblong or oval shape, serrated, veined, pointed, growing close to the common footstalk, which is prickly, and at its base furnished with a sheathy expansion fringed at the edges: the bracteæ are oval, fringed, and placed in pairs at the peduncles, which are smooth: the flowers are large, terminal, two or three together, and of a reddish or flesh-colour: the calyx is pitcher-shaped at its base, fleshy, separated above into five long expanding divisions, subdividing into smaller segments: the corolla consists of five inversely heart-shaped petals: the filaments are numerous, slender, short, inserted in the calyx, and furnished with triangular antheræ: the germens are numerous, in the bottom of the calyx, supplied with an equal number of styles, which are villous, short, compressed in the neck of the calyx, inserted in the side of the germen, and terminated with obtuse stigmata: the fruit is a fleshy smooth oval berry, of a deep flesh colour, formed of the tubular part of the calyx, and containing many long rough seeds. It is a native of Britain, commonly growing in woods and hedges, and flowering in June.

The flowers of this tree frequently make a conspicuous and beautiful appearance in the hedges, and though by some botanists they are said to be inodorous, yet their fragrance is often very perceptible. The fruit, called heps or hips, has a sourish taste,

Rosa centifolia

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and obtains a place in the London Pharmacopœia, in the form of a conserve; for this purpose the seeds and chaffy fibres are to be carefully removed; for if these prickly fibres are not entirely scraped off from the internal surface of the heps, the conserve is liable to produce considerable irritation on the primæ viæ. This officinal preparation of the fruit is not supposed to possess any medical virtue,[a] but it is agreeable to the taste, and well suited to give form to the more active articles of the Materia Medica.

[a] Formerly however it was esteemed useful in many disorders, as dropsies, calculous complaints, dysenteries, hæmorrhages, &c. See Herman, *Diss. de Rosa.* §. 11.

A moss-like prickly excrescence, called *Bedeguar*, *Rose sponge*, and by the French *Galle cheveluë*, is frequently found upon the branches of this tree, and is the habitation of the insect *Cynips Rosæ*. This excrescence was formerly in great repute as a remedy for various diseases. See Gendornius, *Cynosbatologia*, *p.* 136. *sqq.*

ROSA CENTIFOLIA. HUNDRED-LEAVED ROSE.

SYNONYMA. Rosa damascena. *Pharm. Lond.* Rosa pallida. *Pharm. Edinb.* Rosa multiplex media. *Bauh. Pin. p.* 482. Rosa Hollandica sive Batava. *Gerard, Emac. p.* 1262. Rosa centifolia batavica. 11 *Clus. Hist. i. p.* 114.

The varieties of this species, according to Mr. Aiton, are

Dutch Hundred Leav'd Rose.
Blush Hundred Leav'd Rose.
Singleton's Hundred Leav'd Rose.
Burgundy Rose.
Single Velvet Rose.
Double Velvet Rose.
Sultan Rose.
Stepney Rose.
Garnet Rose.
Bishop Rose.
Lisbon Rose.

Class Icosandria. *Ord.* Polygynia. *Lin. Gen. Plant.* 631.

Ess. Gen. Ch. *Petala* 5. *Cal.* urceolatus, 5-fidus, carnosus, collo coarctatus. *Sem.* plurima, hispida, calycis interiori affixa.

Sp. Ch. R. germinibus ovatis pedunculisque hispidis, caule hispido aculeato, petiolis inermibus.

THIS species of Rose-bush commonly rises about five or six feet in height, and is numerously beset with short spines: the leaves are pinnated, consisting of two or three pair of pinnæ, with an odd one at the end; each pinna, or leafit, is oval, or rather egg-shaped, broad, serrated, pointed, veined, hairy, and closely attached to the common footstalk, which is rough, but without spines: the peduncles are covered with short bristly hairs: the flowers are large, commonly of a pale red colour, and the parts of inflorescence, which in their simple and natural state are similar to those described of R. canina, by the effects of cultivation, are forced into numerous petals, and are therefore to be considered as monstrosities.

Most of the Roses, though much cultivated in our gardens,* are far from being distinctly characterized. Those denominated varieties are extremely numerous, and often permanently uniform; and the specific differences, as hitherto pointed out, are in many respects so inadequate to the purpose of satisfactory discrimination, that it becomes a difficult matter to say, which are species, and which are varieties only. The London College, following Gerard and Parkinson, has still retained the name Rosa damascena; but the damask rose is another species, widely different from the centifolia, as appears from the descriptions given of it by Du Roi and Miller.

The petals are directed for medicinal use: they are of a pale red colour, and of a very fragrant odour; which to most people

* This species was cultivated by Gerard; but botanists have not been able to determine its native country.

is extremely agreeable, and therefore this and most of the other roses are much used as nosegays: we may remark however, that in some instances they have, under certain circumstances, produced alarming symptoms.[a] The petals "impart their odorous matter to watery liquors, both by infusion and distillation: six pounds of fresh roses impregnate, by distillation, a gallon or more of water strongly with their fine flavour. On distilling large quantities, there separates from the watery fluid a small portion of a fragrant butyraceous oil, which liquifies by heat and appears yellow, but concretes in the cold into a white mass: an hundred pounds of the flowers, according to the experiments of Tachenius and Hoffman, afforded scarcely half an ounce of oil."†

The smell of this oil exactly resembles that of the roses, and is therefore much used as a perfume.[b] It possesses very little pun-

[a] As sneezing, inflammation of the eyes, faintings, hysterical affections, abortion, &c. (Echtius, in *Adami vit. med. p.* 72.) Many other instances are related by Schenckius, *Obs. Med. rar. p.* 917. See also Nat. Curios. in various parts, cited by Murray, *App. Med. vol. iii. p.* 160. Persons confined in a close room, with a large quantity of roses, have been in danger of immediate extinction of life. *l. c.* From the experiments of Priestley and Ingenhousz this effect seems owing to the mephitic air, which these and most other odoriferous flowers exhale. See Exper. on Vegetables by Dr. Ingenhousz.

† *Lewis, M. M. p.* 541.

[b] The process for making Attar, or Essential Oil of Roses, so much esteemed as a perfume, is related in the *Asiatic Researches* by Colonel Polier, and is as follows:—Forty pounds of roses, with their calyces, are put into a still with 60lb. of water. The mass being well mixed, a gentle fire is put under the still; and when fumes begin to rise, the cap and pipe are properly fixed and luted. When the impregnated water begins to come over, the fire is lessened by gentle degrees, and the distillation continued until thirty pounds of water are come over, which is generally done in about four or five hours. This water is to be poured upon 40 lb. of fresh roses; and thence are to be drawn from 15 to 20lb. of distilled water, by the same process as before. It is then poured into pans of earthen ware, or of tinned metal, and left exposed to the fresh air for the night. The attar or essence will be found in the morning, congealed and swimming on the top of the water.

gency, and has been highly recommended for its cordial and analeptic qualities.[c] These flowers also contain a bitterish sub-substance, which is extracted by water along with the odorous principle, and remains entire in the decoction after the latter has been separated by distillation or evaporation.[d] This fixed sapid matter of the petals manifests a purgative quality, and it is on this account that the flowers are received in the Materia Medica.

The pharmacopœias direct a syrup to be prepared of this rose, which in doses of a spoonful is found to be pleasant and useful as a laxative for children, or to obviate costiveness in adults. The simple distilled rose-water seems to have nothing but its fragrance to recommend it.

[c] *F. Hoffman, Obs. phys. chem. p.* 21. [d] *Lewis, l. c.*

ROSA GALLICA. RED OFFICINAL ROSE.

SYNONYMA. Rosa rubra. *Pharm. Lond. & Edinb. Gerard. Emac. p.* 1261. *Raii. Hist. p.* 1470. Rosa rubra multiplex. *Bauh. Pin. p.* 481. *Du Hamel Arbr. 2. p. 222. t.* 53. Rosa rubra anglica. *Park. Parad. p.* 413.

α Rosa caule subinermi, foliis quinis subtus villosis, calycis foliolis indivisis. *Mill. Dict.*

β Rosa Prænestina variegata plena. *Mill. ic.* 148. *t.* 221. *f.* 2. *Mundi Rose.*

γ *Marbled Rose.*

δ *Virgin Rose.*

Class Icosandria. *Ord.* Polygynia. *Lin. Gen. Plant.* 631.

Rosa gallica

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Ess. Gen. Ch. *Petala* 5. *Cal.* urceolatus, 5-fidus, carnosus, collo coarctatus. *Sem.* plurima, hispida, calycis interiori lateri affixa.

Sp. Ch. R. germinibus ovatis pedunculisque hispidis, caule petiolisque hispido-aculeatis.

THIS species does not rise so high as the Centifolia, but much resembles it in its foliage. Linnæus rests their specific difference on the greater roughness and prickliness of the leaf-stalks of the gallica, but from the observations we have made, this circumstance is not sufficiently remarkable to found the distinction. The petals of this species, though large and spreading, are never half so numerous as in the centifolia, and are of a deep crimsom colour. It is a native of the south of Europe, and is now common in our gardens, flowering in June and July.

" The flowers give out their virtue both to watery and rectified spirit, and tinge the former of a fine red colour, but the latter of a very pale one: the extract obtained by inspissating the watery infusion is moderately austere, bitterish, and subsaline; the spirituous extract is considerably stronger both in astringency and bitterness."[a]

The flowers of this species of rose possess neither the fragrance nor the laxative power of those of the centifolia, but are chiefly valued for their astringent qualities,* which are most considerable before the petals expand, and therefore in this state they are chosen for medicinal use,[b] and ordered by the pharmacopœias in different preparations, as those of a conserve, a honey, an infusion,

[a] *Lewis, M. M. p.* 543.

* Poterius, however, relates, that he found a dram of powdered red roses occasion three or four stools, and this not in a few instances, but constantly in several. See *Lewis, l. c.*

[b] Both the astringency and the colour of the petals are best preserved by hasty exsiccation.

and a syrup. These preparations, especially the first and second, have been highly esteemed in phthisical cases, particularly by the Arabian physicians. Avicenna[c] and Mesue[d] mention some remarkable instances of this kind which were cured by the roses. Riverius also cites several others;[e] and the case of Krüger, related in the German ephemerides,[f] has been thought a still more evident proof of the efficacy of the conserve of roses in phthisis pulmonalis; but as the use of the conserve was constantly joined with that of milk and farinacea, together with proper exercise in the open air, it has been doubted if these recoveries could be wholly imputed to the roses,[g] though their mild astringent and corroborant virtues certainly contributed much.[h]

The infusion of roses is a grateful cooling subastringent, and useful in hæoptysis, and some other hæmorrhagic complaints as a gargle; its efficacy however depends chiefly on the acid. The syrup derives its use merely from its colour.

[c] *Lib.* 3. *Fen.* 10. *Tract.* 5. *cap.* 5. *p.* 275. [d] *Cap. de phthisi.*

[e] *Prax. Med. Lib.* 7. *cap.* 7. *p.* 348. [f] *Dec.* 2. *An.* 4. *obs.* 9.

[g] See *Cullen, M. M. vol. ii. p.* 35.

[h] In some of the cases alluded to, twenty or thirty pounds of the conserve were taken in the space of a month.

AGRIMONIA EUPATORIA. COMMON AGRIMONY.

SYNONYMA. Agrimonia. *Pharm. Geoff. iii.* 46. *Dale.* 112. *Alston. i.* 76. *Lewis.* 28. *Edinb. New Dispens.* 119. *Bergius.* 346. *Murray. iii.* 147. Eupatorium veterum seu Agrimonia. *Bauh. Pin.* 321. Agrimonia. *Gerard. Emac.* 712. Agrimonia vulgaris. *Park.* 594. *Ray. Syn.* 202. Agrimonia foliis pinnatis, pinnulis alterne minimis. *Hall. Hist. Stirp. Helv.* 991. A. Eupatoria. *Hudson. Flor. Ang.* 206. *Withering. Bot. Arr.* 490. *Ic. Flor. Dan.* 588. *Curt. Flor. Lond. Mill. Illustr.*

Agrimonia Eupatoria

Published by W. Phillips

Dodecandria Digynia. *Lin. Gen. Plant.* 607.

Gen. Ch. *Cal.* 5-dentatus, altero obvallatus. *Petala* 5. *Sem.* 2. in fundo calycis.

Sp. Ch. A foliis caulinis pinnatis, impari petiolata, fructibus hispidis.

ROOT perennial, reddish, scaly. Stalk erect, round, hairy, reddish, varying from one to three feet in height. Leaves alternate, interruptedly pinnated, composed of five or six pair of pinnæ, with an odd one at the end: the large pinnæ are commonly sessile, opposite, ovate, deeply serrated, rough. Stipulæ two, opposite, serrated, spreading. Bracteæ trifid. Flowers yellow, on short peduncles, in long simple spikes. Calyx permanent, divided into five segments, which are ovate, pointed, externally surrounded with rigid hairs, internally closed with a yellow substance of a glandular appearance: involucrum at the base of the germen, composed of two dentated leaves. Corolla composed of five petals, which are ovate, yellow, spreading, inserted into the glandular substance of the calyx. Filaments eleven or twelve, yellowish. Antheræ two-lobed. Germen beneath the calyx, supporting two styles, with blunt stigmata. Capsule formed of the calyx, containing two roundish smooth seeds.

It is common in fields about hedges and shady places, flowering in June and July.

"The leaves of Agrimony have a slightly bitterish roughish taste, accompanied with an agreeable though very weak aromatic flavour: the flowers are in smell stronger and more agreeable than the leaves, and in taste somewhat weaker. They readily give out their virtues both to water and to rectified spirit. In distillation with water the leaves afford a small portion of a yellowish essential oil, which smells strongly and agreeably of the herb."*

* Lewis, l. c.

This plant has been principally regarded in the character of a mild astringent and corroborant, and many authors recommend it as a deobstruent, especially in hepatic and other visceral obstructions. Chomell relates two instances of its successful use in cases where the liver was much enlarged and indurated.[a] It has been used with advantage in hæmorrhagic affections, and to give tone to a lax and weak state of the solids. In cutaneous disorders, particularly in scabies, we have been lately told that it manifests great efficacy;[b] for this purpose it was given infused with liquorice in the form of tea: but according to Alston it should be always exhibited in the state of powder.

[a] Usuelles. t. 2. p. 165.

[b] Becker Diss. de Eupatorio Græcorum seu Agrimonia viribus. Erf. 1783.

GEUM URBANUM. COMMON AVENS.

SYNONYMA. Caryophyllata. *Pharm. Dale.* 160. *Geoff. iii.* 263. *Alston. i.* 404. *Lewis.* 205. *Edinb. New Dispens.* 164. *Bergus.* 445. *Murray. iii.* 122. Caryophyllata vulgaris. *Bauh. Pin.* 321. *Park. Theat.* 136. *Ray. Hist.* 606. *Synop.* 253. *Gerard. Emac. p.* 995. G. urbanum. *Hudson. Flor. Ang.* 198. *Withering. Bot. Arrang. p.* 537. *Ic. Curt. Flor. Dan. t.* 672.

Icosandria Polygynia. *Lin. Gen. Plant.* 636.

Gen. Ch. *Cal.* 10-fidus. *Petala* 5. *Sem.* arista geniculata.

Sp. Ch. G. flor. erectis, fruct. globosis villosis, aristis uncinatis nudis, foliis lyratis.

ROOT perennial, fibrous, brown. Stalks branched, somewhat angular, hairy, about two feet in height. Leaves varying, com-

Geum urbanum

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monly pinnated, hairy, toothed; pinnæ two pair, of which the lower are almost circular; the upper pair elliptical; terminal leaf the largest, and frequently cut into three lobes. Flowers terminal, on long hairy peduncles. Calyx divided into three segments, which are alternately large and small. Corolla composed of five roundish yellow petals, widely spreading from each other. Filaments numerous, yellowish, tapering, inserted into the calyx. Antheræ roundish. Germina many, hairy, collected into an orbicular shape. Styles jointed in the middle, enlarged at the top, and furnished with simple stigmata. Seeds numerous, compressed, rough, crooked near the extremity, terminated by a long arista.

It is a common British plant, in woods and hedges, flowering from June till August.

The root, which is the part of this plant medicinally employed, has an aromatic and somewhat astringent taste, and a pleasant smell of the clove kind, especially when it is produced in dry and warm soils. "It gives out its astringent matter equally to watery and spirituous menstrua; its aromatic part most perfectly to the latter. In distillation with water it yields a small quantity of a whitish concrete oily matter, of a very grateful fragrance."[a]

According to Buchhave it yields a greater proportion of watery than of resinous extract.

This plant, though little used in Britain, is held in great estimation on the Continent, where its virtues have been long considered as extremely various: but the character in which it has been lately received, and most particularly celebrated since the year 1780, is that of a febrifuge; thus Buchhave,[b] Aaskow, Callisen, Bang, Schönheyder, and Tode, also Weber and Koch,[c] Anjou,[d] &c. all bear testimony of its efficacy, adducing numerous instances of

[a] Lewis, l. c.

[b] *Obs. circa radicem Gei urb.*

[c] *Diss. de nonnullorum febrifugorum virtute, et speciatim Gei urbani radicis efficacia.*

[d] *Diss. de radice Caryophyllatæ.*

its successful exhibition in obstinate intermittents, many of which yielded to the root of this plant, after the Peruvian bark had failed.

It is said that a tincture of this root, made in the proportion of four ounces of the root digested with a quart of brandy in a sand heat, and given to the quantity of half an ounce or more, two, three, or four times a day, seldom fails to cure agues. Others gave it with equal success in decoction, powder, or electuary, in the proportion in which the Cinchona bark is commonly employed.

This root has also been found an useful medicine in several chronic disorders, as a general tonic and astringent; and experiments made by Buchhave show its antiseptic power to exceed that of Peruvian bark.

Medicinal Plants of this order, not introduced into this work, are

Systematic Names.	Officinal.	English.
Spiræa Filipendula	Filipendula	Dropwort
Spiræa Ulmaria	Ulmaria	Meadow-sweet
Geum rivale	Geum rivale	Water Avens
Potentilla Anserina	Anserina	Silvery Cinquefoil
Fragaria vesca	Fragaria	Strawberry
Alchemilla vulgaris	Alchemilla	Ladies Mantle

END OF VOL. III.

Tormentilla erecta

Published by W. Phillips, June 1st 1809.

TORMENTILLA ERECTA. COMMON TORMENTIL, Or UPRIGHT SEPTFOIL.

SYNONYMA. Tormentilla, *Pharm. Lond. & Edinb.* Tormentilla Officinalis, *Curt. Flor. Lond.* Fragaria tetrapetala, foliis caulinis sessilibus quinatis. *Hal. Stirp. Helv.* n. 1117. Tormentilla sylvestris, *Bauh. Pin.* 326. Pentaphyllum aut potius Heptaphyllum, flore aureo tetrapetalo, Tormentilla dictum. *Hist. Oxon,* II. 190.

Class Icosandria. *Ord.* Polygynia. L. *Gen. Plant.* 635.

Ess. Gen. Char. *Cal.* 8-fidus. *Petala* 4. *Sem.* subrotunda, nuda, receptaculo parvo exsucco affixa.

Spec. Char. T. caule erectiusculo, foliis sessilibus.

THE root is perennial, thick, roundish, irregularly conical, knobbed, and covered with bark of a dark brown colour; the internal substance is dense, and has a reddish tinge; it sends forth many stems, which grow about a span high; they are round, slender, firm, somewhat hairy, more or less erect, and branched towards the top. The leaves upon the stalk are generally divided into seven, but those upon the branches are commonly five; of these, three are larger than the others; they are all of an eliptical shape, deeply serrated, villous, and the upper surface is of a deeper green colour than the under. The flowers stand singly upon long peduncles, which spring from the alæ of the leaves, each flower consisting of four small, roundish, emarginated, yellow petals; the calyx is cut into eight unequal segments; the pistilla are commonly eight, and contain as many seeds. This plant is common in dry pastures, and usually flowers in June. It is distinguished from the Tormentilla reptans, by its sessile leaves, its smaller petals, and its more erect stem.

The root is the only part of the plant which is used medicinally; it has a strong styptic taste, but imparts no peculiar sapid flavour. As a proof of its powerful astringency, it has been substituted for

oak bark in the tanning of skins for leather.[a] This root has been long held in great estimation by physicians, as a very useful astringent; and as the resin[b] it contains is very inconsiderable, it seems more particularly adapted to those cases where the heating and stimulating medicines of this class are less proper, as phthisical diarrhœas, diarrhœa cruenta, &c. Dr. Cullen[c] thinks "it has been justly commended for every virtue that is competent to astringents," and says, "I myself have had several instances of its virtues in this respect; and particularly I have found it, both by itself and as joined with gentian, cure intermittent fevers; but it must be given in substance, and in large quantities." Rutty recommends it in these words: "Ulcera vetera & putrida sanat vino vel aqua decocta collutione & inspersu. In vino cocta optime deterget & roberat, in ulceribus scorbuticis oris, gutturis, & faucium ac in gingivis dissolutis, sanguinem stillantibus. Decocta ad appetitum deperditum maxime valet, tonum ventriculi restituens, & sordes ejus abstergens. Non est vegetabile quod in fluxionibus alvi efficacius sit. In dysenterea epidemica quidam in ore tenent ad præcavendum contagium. In fluxu sanguinis, fluore albo, & mictu involuntario valet."[d]

This root may be given in powder from half a dram to one dram or more for a dose, but it is more generally given in decoction, and the following form is recommended by Lewis: An ounce and an half of the powdered root is directed to be boiled in three pints of water to a quart, adding, towards the end of the boiling, a dram of cinnamon: of the strained liquor, sweetened with an ounce of any agreeable syrup, two ounces or more may be taken four or five times a day.

Tormentil is ordered in the pulvis e creta compositus of the London Pharmacopœia.

[a] Bartholini Act. Med. Hafn. v. 1. p. 88. and it has been observed, that the leather has been perfected in less time than when oak bark was used. Mus. Rust. vol. 2. n. 12. p. 51.

[b] It gives out its astringency both to water and rectified spirit, most perfectly to the latter. The extracts obtained by inspissation, are intensly styptic, the spirituous most so. Lewis's Mat. Med. 654.

[c] Cullen's Mat. Mat. vol. 2. p. 36. [d] Rutty's Mat. Med. 521.